

2.7 Unit R006: Creating digital images

Aims

This unit builds on Units R001 and R002 and learners will be able to apply the skills, knowledge and understanding developed in those units and vice versa. This unit will enable learners to acquire the underpinning knowledge and skills to enable them to create, edit, enhance and save different types of digital images.

We live, learn, work and play in a very visual world. Whether we like it or not digital images influence our actions and thoughts – persuading us to buy one product instead of another, instructing us to go this way rather than that, explaining a complicated scientific concept and portraying an emotion or expressing a feeling using powerful digital art. With or without words successful digital images will convey their message effectively so that the viewer receives and understands it – and can then act upon it.

The most famous type of digital image is a logo or brand concept. Large companies will spend hundreds of thousands of pounds on their brand image (such as the London 2012 logo; BBC One re-branding) and may re-brand products many times over their life. Pepsi has had 11 re-brandings: The graphic design industry is big business.

On completion of this unit learners will be able to create a digital image that communicates the intended message effectively, meeting the client's needs, and they will have extended their capability within the use of digital editing software packages.

Learning Outcome 1: Be able to specify a digital image solution for a client's needs

Learners must be taught how to:

- analyse a client brief to determine success criteria: suitability; relevance; measurability
- select and use research methods, i.e. image/thought showers/spider diagrams; interviews/focus groups; questionnaires/surveys; competitor/market research/stakeholder perceptions
- select and use creative design plans, i.e. storyboards; roughs/sketches; design concepts/layouts
- select and use component sources, i.e. image capture (e.g. camera, scanner); hand-drawn design; client-provided images; stock images; internet; effect of sourced components on final image quality, i.e. file size, resolution, scalability, noise
- identify the implications of legislation on sources, i.e. Copyright Law; Intellectual Property Rights; photo permissions and releases; acknowledgement and referencing of sources¹.

Learning Outcome 2: Be able to create digital images

Learners must be taught how to:

- select and use software for different purposes², i.e. software for vector-based images; software for bitmap/raster-based images
- set image/canvas size and image resolution for different outputs/output sizes for print and for screen³ (as appropriate to the software)
- use standard software tools to create and edit digital images, i.e. cut, copy, crop, paste; select parts of images; move, align and order components; group/ungroup components; rotate and flip; create lines, curves and shapes, i.e. basic and freehand; change stroke and fill, i.e. colour, thickness, style; draw/paint, i.e. pencil, brush, bucket; insert and edit text, i.e. colour, font, size
- select and use specialised software tools to enhance digital images, i.e.:
 - filters, i.e. sharpen, blur, noise; colour balance, levels and curves; masks and layers
 - retouching tools, i.e. clone, red eye; trace; edit and combine paths
 - opacity/transparency; transform, scale, rotate and distort
 - text effects, i.e. attach to path; guides/guidelines

- combine components to create complex composite digital images, i.e. multiple-step processes; multi-layering; combine output from different software applications
- feedback/evaluate, i.e. recognising merits and faults of technical features; constructive feedback.

Learning Outcome 3: Be able to store, retrieve and present digital images

Learners must be taught how to:

- use storage systems, i.e. standard naming conventions; version control; archiving
- use file formats for working files⁴, i.e. native file formats (e.g. AI, CDR, PSD, PSP); standard bitmap-based formats (e.g. TIFF, JPEG, GIF, PNG); vector-based formats (e.g. SVG, EPS, WMF, AI, DPP)
- use file formats for final output, i.e. save and/or export; resolution; colour mode; size (e.g. physical and digital); orientation; optimisation⁵/compression; dependent upon method of display or printing
- recognise the effect of different file formats on image quality and size
- use presentation methods⁶, i.e. exhibition; printed portfolio; digital portfolio; mock-up/visual representation; print/web sizes; print media; colour options.

Links between units and synoptic assessment

If learners have already completed units R001 and R002 they will already understand why and how storage systems are used. Teachers should take note that coverage of storage systems is in units R001, R002 and R006 and manage the teaching of this area of learning accordingly.

¹ Unit R002 LO1 develops research skills in using the internet.

² Unit R001 LO4 supports this by developing an understanding of the implications of legislation including copyright laws and the consequence of non-compliance with their provisions.

³ Unit R002 LO3 supports this by considering how the purpose and audience influences the choice of product and content.

⁴ Unit R001 LO2 supports this by developing an understanding of optimisation and the factors to be taken into account whilst optimising objects.

⁵ Unit R001 LO2 develops an understanding of optimisation and filetypes that addresses these three bullets.

⁶ Unit R002 LO3 supports this by considering how the purpose and audience influences the choice of document type, and how the document type influences the choice of software.