UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge ICT Starters
Next Steps

Scheme of Work

4279
Exploring Images
Stage 1 Module

UNIVERSITY *of* CAMBRIDGE
International Examinations

Introduction

In this module, students develop their skills in creating and developing pictures and designs, using a variety of graphical tools and saving their outcomes in digital form. Students should be given opportunities to import and edit images from a range of sources – such as clipart, graphics packages and, if available, scanners or digital cameras – and use these to create their own ideas for images. Students also practise creating repeating patterns or effects by using stamps, symmetry or copy tools.

What is Assessed in This Module?

Students will demonstrate how to:

- create repeating patterns using stamps and/or copy tools
- create pictures using a variety of tools and effects
- select appropriate objects, copy and re-size them
- save drafts showing the development of the design

To Start This Module You Will Need

- a graphics package with a range of tools and edit features, including symmetry tools (rotate and flip) and different brush sizes or effects such as MS Paint. Other suitable software includes Painter, the 'Paint' package in AppleWorks, KidPix Studio and Fresco or even the Drawing Tools within Microsoft Word
- a variety of images: these can include images collected from the web, clip-art or images that the students create for themselves using a scanner or digital camera
- a scanner or digital camera (optional)
- sources of inspiration for repeating patterns such as: wallpaper, patterned fabric, wrapping paper
- sources of inspiration for images such as: famous artworks and magazines

Underpinning Knowledge

Before commencing this module it is recommended that students know how to:

- save and retrieve work
- open the graphics program and create a new blank image

General Principles and Procedures

The following are further suggestions and considerations:

- students will benefit by learning about the versatility of digital images, that they can be given names, saved, moved, edited, copied and used in different software packages
- although it is not necessary for this module, students will benefit from learning as soon as possible about different picture formats and image file sizes, as these can often pose problems e.g. a scanned file might be too big to fit on a floppy disk
- encourage good practice when naming and saving image files: students could include the phrase 'version1/2/3' or 'first/next/final draft in the file name. Students should save regularly
- providing a scanner and/or a digital camera will make this a richer experience although it's not necessary to fulfill the Learning Objectives of the module
- configuring settings to low quality (or compressed file types) on both scanner or digital cameras before students use them, will reduce problems of oversized files and potential difficulties with compatibility with graphics software
- using good inspirational material and having a good resource bank of images for students to use will allow students with limited 'artistic' skills to do well in this module
- encourage use of the undo button to correct mistakes or to 'try out' ideas

- using hot keys like Control+V for paste can help students who are not so adept with the mouse
- regular class discussions (and looking at the work of others) can be very useful in helping students to understand what makes a good image and allows them to benefit from each others ideas
- encourage students to use correct terminology when talking to each other about their work e.g. 'I used the rotate tool to turn the flower around'
- encourage students to use the zoom or magnify option to improve the accuracy of their work

Scheme of Work

Recommended prior learning – Complements and extends Initial Steps Stage 1 Module – Starting Images

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan One			
- create patterns by copying - create patterns using the symmetry tool - create patterns using flip and rotate tools - select objects and copy them - resize selected objects - save and retrieve image files	• teacher demonstrates how to use the graphics software: - how to load an image - how to paste a copied image - how to use the different tools to create patterns - how to use Save As • students practise by: - 'fill the space with a face' - Fill the blank page by repeating copies of a small image of a face (in a tiled pattern). this will help students to work out which methods are best and to get placement accurate - change the arrangement by flipping some of the images this time – think about which ones you want to flip – alternate rows/every other repeat? - experiment with the colours - change the size of some of the objects to create a new pattern	• paint package with symmetry tool	• students can be encouraged to explore a range of fill, colour change and resizing options in their patterns • the undo tool is very useful to correct mistakes and to 'try out' ideas

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan One Continued			
	• students look at real-life examples of wrapping paper (or similar). They work out: - what is repeated - how often - how it is tessellated • students use what they have learned to create a wrapping paper to gift wrap flowers • save their best version and compare with the rest of the class. Class discusses which ideas worked best	• examples of real-life items with repeating patterns e.g. wrapping paper, wall paper, patterned fabric	• students will benefit from learning how to open and copy a file (or part of an image) and then paste it into a new image. Or copying from one application to another • students may find it easier to copy examples rather than read and follow instructions • encourage students to draw conclusions about what works and what doesn't work well • to back up work with images, students could learn to search for images on the internet or learn how to create their own source images using a scanner or digital camera

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Two			
• create pictures using a variety of brush sizes • create pictures using a variety of tools	• students attempt to make copies of famous paintings • students compare and share how best to create various effects	• examples of famous paintings or other images	• careful choice of example paintings to copy will encourage experimentation and the use of a wide range of tools and effects • students might not need to have new tools demonstrated if they have a level of confidence with the software and there is a good mood of experimentation • encourage students to talk about what works best and what tools they used

Learning Objectives	Classroom Ideas	Resources	Notes
Session Plan Three			
• students gain a basic understanding of layout and design • edit designs in the process of creating a final picture	• students design a book cover which could include: - a patterned border - a picture/s - some text - this could be sketched out by hand first • students save a first draft • students present their book cover to the class explaining what tools they have used to create it • students give feedback to each other and make suggestions for improvements • students refine their work based on the comments from the group and their own evaluation • students work on and save a final draft	• examples of magazines with interesting page backgrounds • greetings cards with combinations of borders and images	• when evaluating each others work students should be encouraged to give positive feedback but also make suggestions of how something could be improved rather than criticism • students work best if they are given a clearly defined task – so creating a book cover for a book they know well will be better than an imaginary one • students may need to create several drafts to get to a good finished result • encourage use of zoom/magnifier to improve quality • image files for use can be placed in a single word document for simple copying and pasting

Assessment Ideas

To show how the Assessment Idea fully incorporates the Learning Objectives tested, the Assessment Idea is cross-referenced with the Learning Objective table below.

Assessment Idea

You have been asked to create the design for the back of a new set of playing cards for use by five to eight year olds. The cards will have a central picture and a border.
Open the blank image file which is the correct size for the card design. Create a repeating pattern for the border of this card using one or more of the images supplied (1). In the centre draw a picture using at least 3 different tools (2). Save your image file. Insert the school logo onto the card and resize it so that it fits well on the card (3). Save your image file as a new version. Continue to work on your card design, making changes to colour or adding items to make the design attractive. Save your finished image file as the final version (4)

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	Stage 1 Module – Exploring Images
1	Create repeating patterns using stamps and/or copy tools
2	Create pictures using a variety of tools and effects
3	Select appropriate objects, copy and re-size them
4	Save drafts showing the development of the design

Teachers should retain the following evidence for moderation:

- copy of the assignment
- students saved first draft
- students saved final draft

Resource List

Books

Title	Author	Publisher	ISBN	Year
Digital Photography Handbook	Mark L. Chambers	Hungry Minds, Inc	076453517X	2001
Digital Photography For Dummies®	Julie Adair King	Hungry Minds, Inc	0764506463	1999
Digital Photography! I Didn't Know You Could Do That...	Erica Sadun	Sybex	0782128432	2000
Scanners for Dummies	Mark L. Chambers	Hungry Minds, Inc	0764507834	2001

Websites

Original tutorials to Graphics software
http://graphicssoft.about.com/library/tuts/bltutindex.htm

The Kidlink gallery of computer art
http://www.kidlink.org/KIDART/

Surfing The net with kids: Digital Photography
http://www.surfnetkids.com/digitalphoto.htm

Digital Photography for the Classroom
http://www.k12.hi.us/~rkubota/digiphoto/

Full Sized Pictures To Colour In Your Paint Program
http://pages.cthome.net/hayescraze/kidsc.html

Using a Digital Camera in the Classroom
http://www.geocities.com/Athens/Olympus/7123/camera.html

Creating Your Own Art With Windows Paint
http://www.packardbell-europe.com/library/paint/paint.html

CD Roms

Title	Publisher	ASIN
PhotoSUITE 4.0 Platinum Edition	MGI Software	B00004WFW7
Granada Draw	Granada Learning	
Macdoodle - paint program	Etchalon	http://website.lineone.net/~andy.pritchard/Mdoo.html
Microsoft Picture It Premium 2002	Microsoft	B00005N9AH
Photo Express 4.0 Digital Studio	ULEAD, INC.	B000059GC6
JumpStart Artist	Knowledge Adventure	B00001XDUD
Print Shop Deluxe 11.0	Broderbund	B00004W4CT
Paint Shop Pro	Jasc	B00005U2EP

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