



Raspberry Pi

Year 4 - Photo editing

Unit introduction

Learners will develop their understanding of how digital images can be changed and edited, and how they can then be resaved and reused. They will consider the ethics and impact that editing images can have, and evaluate the effectiveness of their choices.

Throughout this unit, there are opportunities to model with photo editing applications or to demonstrate a concept using the included screen recordings. Pedagogically, it is more beneficial to model the concepts and skills to the learners, which allows for easier questioning and understanding. We recommend that you use the screen recordings to see what needs to be modelled, but give a live demonstration within the lesson. However, the videos are provided on the slides if you wish to use them instead.

Overview of lessons

Lesson	Brief overview	Learning objectives
1 Changing digital images	In this lesson, you will introduce learners to the concept of editing images and discuss whether or not editing is ethical. They will go on to explore when we need to rotate and crop an image as well as how to use an image editor to make these changes. Learners will then discuss image composition.	To explain that the composition of digital images can be changed <ul style="list-style-type: none">• I can improve an image by rotating it• I can explain why I might crop an image• I can use photo editing software to crop an image• I understand that editing images can be unethical

2 Recolouring	In this lesson, learners will look at the effect that different colours and filters can have on an image. They will choose appropriate effects to fit a scenario, and explain how they made their choices. They will then edit the images using different effects to suit two different scenarios.	To explain that colours can be changed in digital images <ul style="list-style-type: none"> ● I can explain that different colour effects make you think and feel different things ● I can experiment with different colour effects ● I can explain why I chose certain colour effects
3 Cloning	In this lesson, learners will be introduced to the cloning tool and its use in both changing the composition of a photo and photo retouching. They will see how parts of a photo can be removed or duplicated using cloning. Learners will consider what parts of an image can be retouched and learn techniques to make this as unnoticeable as possible. Finally, they will consider when it is necessary to edit photographs in this way.	To explain how cloning can be used in photo editing <ul style="list-style-type: none"> ● I can add to the composition of an image by cloning ● I can identify how a photo edit can be improved ● I can remove parts of an image using cloning
4 Combining	In this lesson, students learn how to use different tools to select areas of an image. Learners then use copy and paste within one image and between two images to produce a combined image. Finally, learners will consider when it's appropriate to edit an image and discuss some of the ethics around retouching photos.	To explain that images can be combined <ul style="list-style-type: none"> ● I can experiment with tools to select and copy part of an image ● I can use a range of tools to copy between images ● I can explain why photos might be edited

5 Creating	In this lesson, learners will apply all the skills they have learnt in the unit so far. They will start by reviewing some images and considering what makes an image look real or made up. Learners will then plan their own image. They will choose from a selection of images, open them and edit them to create their own project.	To combine images for a purpose <ul style="list-style-type: none"> ● I can describe the image I want to create ● I can choose suitable images for my project ● I can create a project that is a combination of other images
6 Evaluating	This lesson is the final lesson in the unit on photo editing. Learners will review the image that they created in Lesson 5. After they have reviewed their image, they will have the opportunity to make changes to their image based on their review. Learners will then add text to their image to complete it as a publication.	To evaluate how changes can improve an image <ul style="list-style-type: none"> ● I can review images against a given criteria ● I can use feedback to guide making changes ● I can combine text and my image to complete the project

Progression

This unit progresses students' knowledge and understanding of digital photography and using digital devices to create media. Following this unit, learners will further develop their image editing skills in Year 5 – Vector drawing.

Please see the learning graph for this unit for more information about progression.

Curriculum links

[Computing national curriculum links](#)

- Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information
- Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Education for a Connected World links

Self-image and identity

- I can describe ways in which people might make themselves look different online

Assessment

Formative assessment

Assessment opportunities are detailed in each lesson plan. The learning objectives and success criteria are introduced in the slide decks at the beginning of each lesson and then reviewed at the end. Learners are invited to assess how well they feel they have met the learning objective using thumbs up, thumbs sideways, or thumbs down.

Summative assessment

Please see the assessment rubric document for this unit. The rubric can be used to assess student's work from Lessons 5 and 6.

Subject knowledge

All lessons

- You will need to be familiar with the tools used throughout the unit in paint.net or your chosen image editor, and know how to save a new version of an image from within the editor. You can find a guide to all tools in paint.net at www.getpaint.net/doc/latest/index.html.
 - You should consider how the learners will access the editor. For example, you may wish to create a shortcut to the program for them.

Lesson 1

- You will need to be familiar with the effect that cropping can have on an image. You can find more information at www.dpreview.com/forums/post/56318241.

Lesson 2

- You will need to be familiar with how to make image adjustments and change effects in paint.net, or your chosen image editor — there is a video in the lesson for support if you need it.

Lesson 3

- You will need to be familiar with the tools used in this lesson in paint.net or your chosen image editor. For more information about tools in paint.net, visit the following websites:
 - Guide to all tools in paint.net: www.getpaint.net/doc/latest/index.html
 - The ‘clone stamp’: www.getpaint.net/doc/latest/CloneStamp.html

Lesson 4

- You will need to be familiar with the tools used in this lesson in paint.net or your chosen image editor. For more information about tools in paint.net, visit the following websites:
 - Guide to all tools in paint.net: www.getpaint.net/doc/latest/index.html

Lesson 5

- You will need to be familiar with the tools used in this lesson in paint.net or your chosen image editor.

Lesson 6

- You will need to be familiar with the text tool in paint.net or your chosen image editor. For more information about these tools in paint.net, visit www.getpaint.net/doc/latest/TextShapeTools.html.

Enhance your subject knowledge to teach this unit through the following free CPD:

- [Getting started in Year 4 – short course](#)
- [Introduction to primary computing remote or face to face](#)

To further enhance your subject knowledge, enrol on the [primary certificate](#). This will support you to develop your knowledge and skills in primary computing and gain the confidence to teach great lessons, all whilst earning a nationally recognised certificate!

Resources are updated regularly – the latest version is available at: ncce.io/tcc.

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