

Unit 83 - Digital Design and Graphics

Overview

The candidate can use their practical understanding of design and to build these in, where appropriate, to their own digital materials. They will explore the processes, tools and applications, and best practices to make the correct graphical materials for the required situation. A graphic may need to be scalable to be used on a variety of material sizes without distortion. They will make compressed images that retain some of their quality, but are more suited to a web based delivery system. They will also understand the legal frameworks and practices that protect designs.

A work activity will typically be 'non-routine or unfamiliar' because the task or context is likely to require some preparation, clarification or research to separate the components and to identify what factors need to be considered. For example, time available, audience needs, accessibility of source, types of content, message and meaning, before an approach can be planned; and the techniques required will involve a number of steps and at times be non-routine or unfamiliar.

Example of context – create a range of designs for a company brand such as logos, banners and supportive graphics.

Assessor's guide to interpreting the criteria

General Information

RQF general description for Level 2 qualifications

- Achievement at RQF level 2 (EQF Level 3) reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.
- Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems. Interpret relevant information and ideas. Be aware of the types of information that are relevant to the area of study or work.
- Complete well-defined, generally routine tasks and address straightforward problems. Select and use relevant skills and procedures. Identify, gather and use relevant information to inform actions. Identify how effective actions have been.
- Take responsibility for completing tasks and procedures subject to direction or guidance as needed.

Requirements

- Standards must be confirmed by a trained Gold Level Assessor or higher.

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- Assessors must at a minimum record assessment judgements as entries in the on-line mark book on the INGOTs.org certification site.
- The work in the unit is recommended in order for candidates to have covered enough depth and breadth in the topic to successfully carry out their controlled assessment and take the external exam.
- When the candidate has covered as much of this material as necessary to complete the controlled assessment element, they may be introduced to the topic
- This unit should take an average level 2 learner 25 hours of work to complete.

Assessment Method

This unit will be assessed synoptically via a controlled assessment and also through an external examination.

Expansion of the assessment criteria

1. Understand the tools and applications for digital designs

1.1 I can understand the basic design process

Learners will, through their work and practice, demonstrate an understanding of the design process

Additional information and guidance

The design process will vary depending on what designs the learners are producing and other factors such as the required end product. Is the design the final one to be used, or will it be used as part of another design that the learner is not involved in, for example, they could make a logo that a client is going to use themselves on their website.

All of their designs should show a basic process. There is no hard and fast rule and it will depend on the learner, but should be something like:

1. Analysis - finding out what needs to be created and how
2. Rough designs - practice with some designs and check with client
3. First/Second etc. Drafts - designs which are close to the final product
4. Final Draft - the completed design which may need small adjustments
5. Production - making the design
6. Feedback - reflect on the process for next time

Learners should appreciate that all of these are required in different amounts. The more research

and practice undertaken, the better the end result will be.

1.2 I appreciate the need for clarity when designing something digital

Learners will demonstrate their understanding of clarity of design

Additional information and guidance

Once you have mastered a digital skill, the temptation is to overdo what you have mastered to the point where the design becomes very poor. Most learners will have at some point made a presentation with every conceivable font, colour and animation effect possible and now appreciate that it is hard to know what the design is for. Similarly with graphic design, too many special effects and filters can overpower a design and ruin the original concept. Clarity is the ability to know when enough is enough. The two logos should illustrate this point.

Logo 1



A plain logo with a simple drop shadow on a transparent background might be all that is required.

Logo 2



It seems unlikely that the client would like a supernova, coffee stain, blinds and cloth effect as much as you like applying them. It is still possible to make out the underlying logo, but is far from clear as it is in Logo 1.

1.3 I can explain the main elements of design tools for accuracy and quality

Learners will explain the tools they use for accurate and high quality designs

Additional information and guidance

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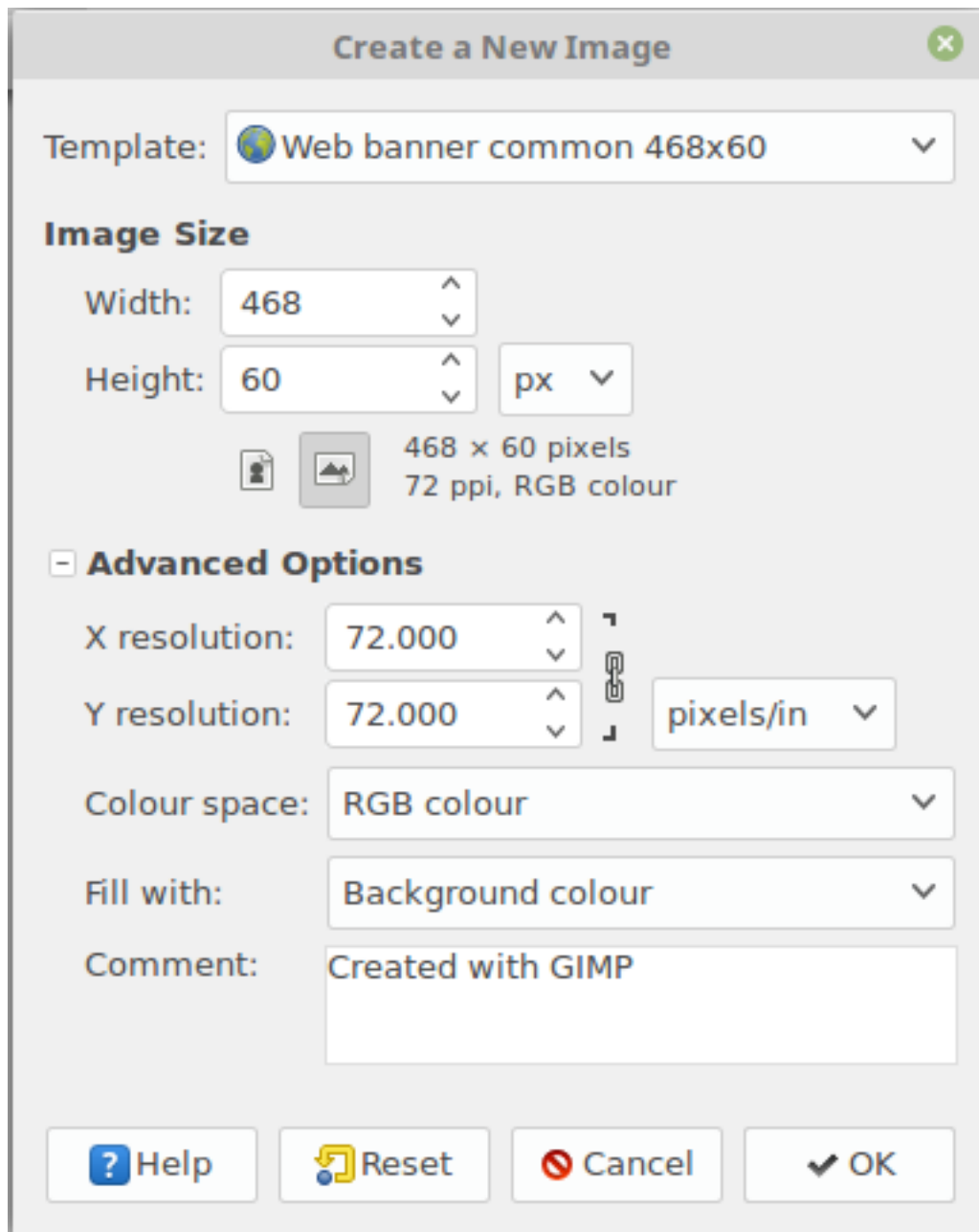
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The size and quality of images will often depend on the medium they will be used on. The following web page gives an indication of some of the size requirements for different web accessible devices.

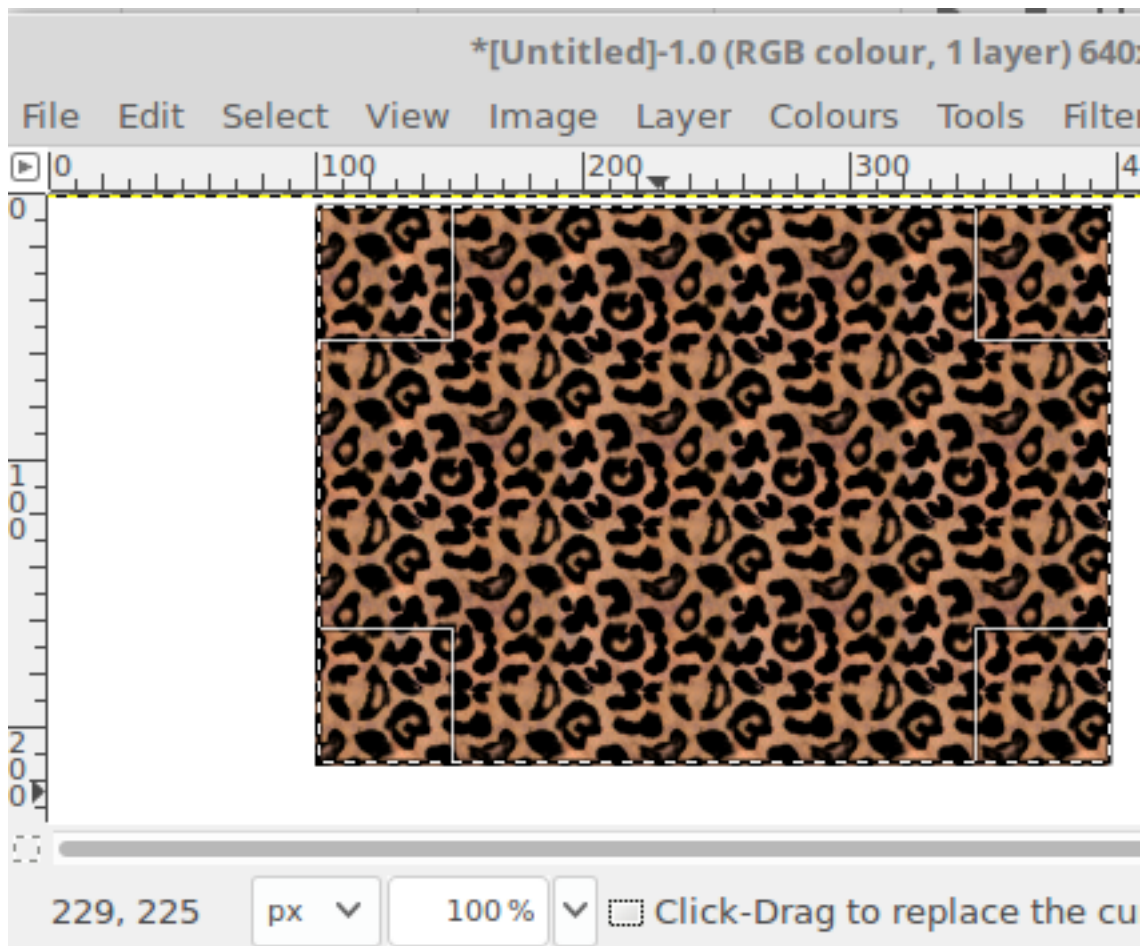
<http://www.fileformat.info/tip/web/imagesize.htm> [1]

Using this type of information, learners should appreciate that making a banner for a website that will mostly be viewed on a smartphone will require the design to be a certain size, for example 800x600 pixels. When creating designs, some graphic tools will have pre-set templates.

The following image is from an open source graphics program called the GIMP (Graphics Image Manipulation Program) which has pre-set templates for images based on whether it is for print or for the Internet.



Other options can be set such as transparent backgrounds and image resolution, in the above as pixels per inch. The graphics programs usually have rulers and other tools for more precise measurements.



The image here shows some of the measurements and some of the tools that adjust the shape as well as guides to tell you how much.

1.4 I can understand how to research the best tools for different design jobs

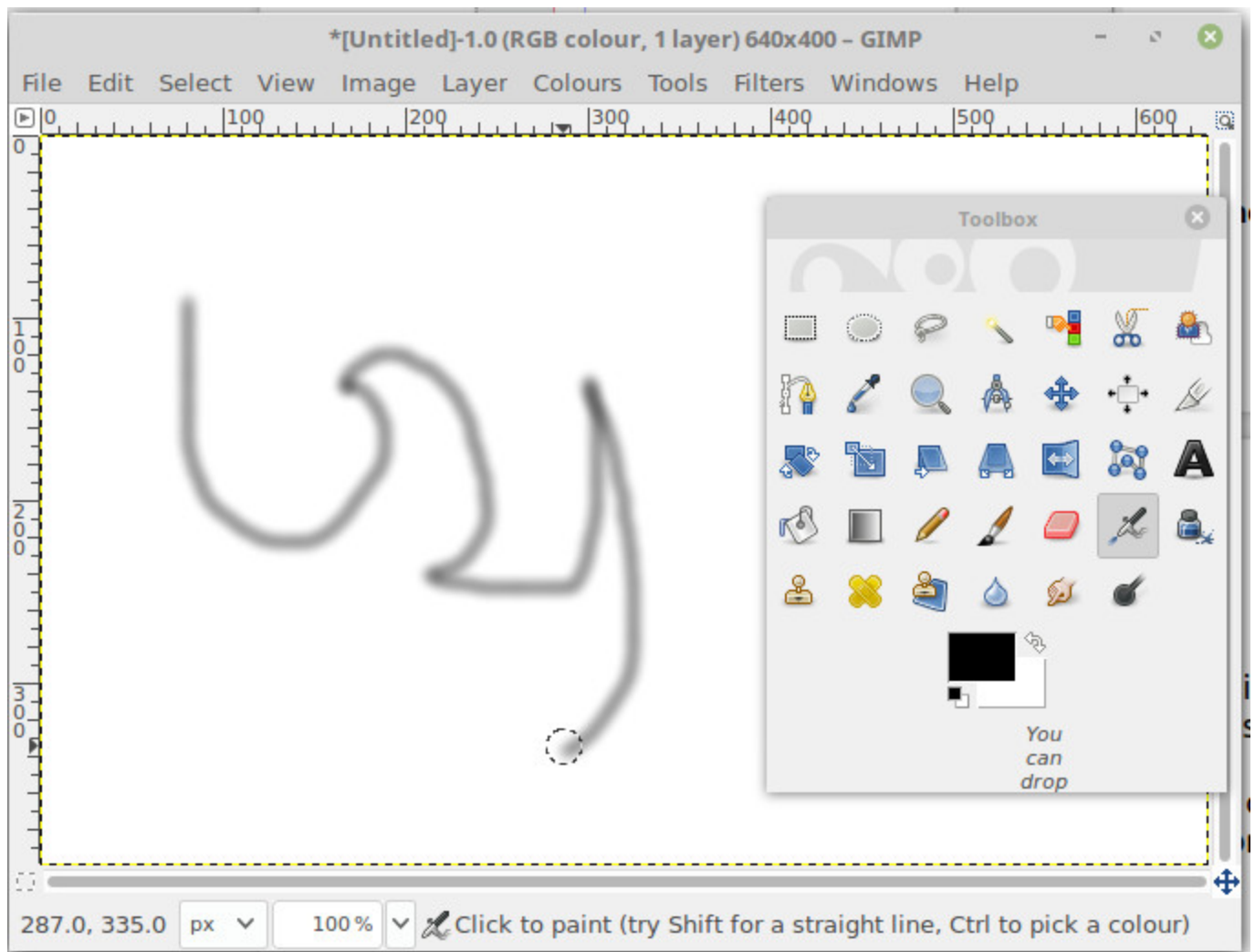
Learners will demonstrate an understanding of a range of different tools

Additional information and guidance

Most graphic design packages will have a similar set of tools, though some will have specific tools which differentiate them in the marketplace, especially if they are proprietary commercial products as that is what determines some of their value. Learners can experiment with different applications, if the network allows, in order to discover what is the right tool for them. The basic interface of the GIMP application is below showing the use of an airbrush tool.

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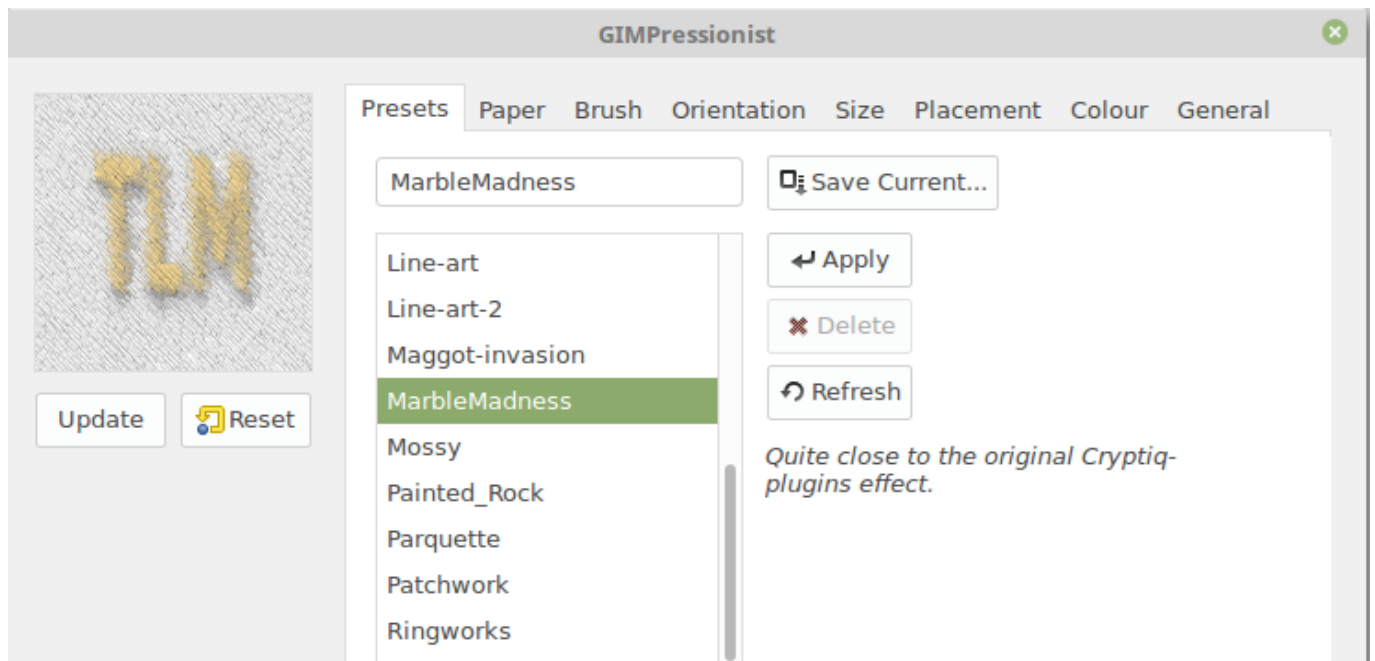


A good bit of research, if using something like GIMP, is to try some of their online tutorials to learn a few techniques, if they are appropriate.

<https://www.gimp.org/tutorials/> [2]

Going through the basics and one or two more intermediate tutorials should be good practice.

Some of the different filters and effects can be explored to see if they are worth investigating and making notes on them will be useful so that when they do another project they know what is good or bad.



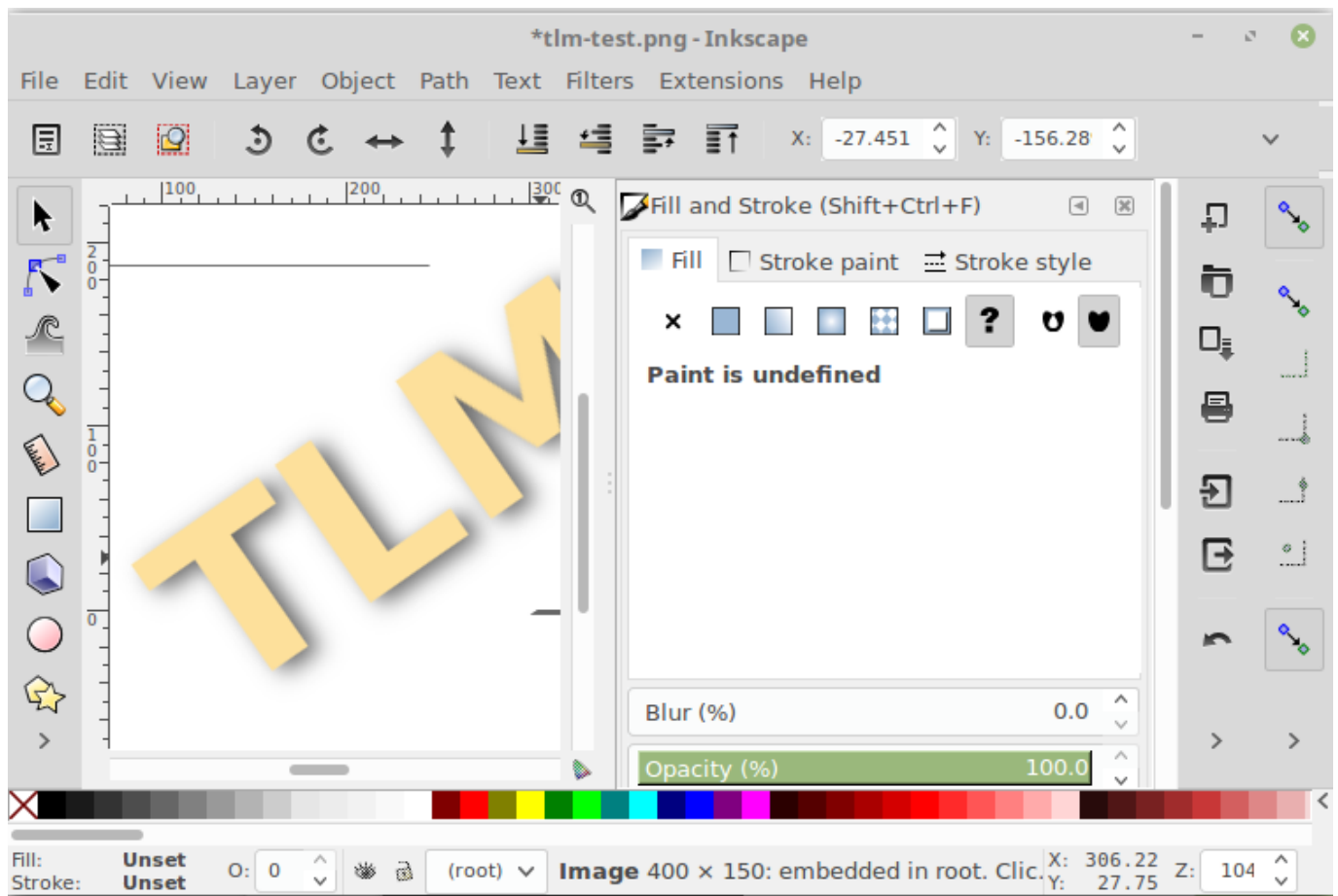
Research will allow learners to see what sort of tools are used for different graphical effects and if these seem suitable for their project, they can learn them and use them. Most of these tools, as above, will allow you to apply effects to see the result before making them permanent.

1.5 I can explain the file formats used for different outputs

Learners can demonstrate an understanding of file formats and outputs

Additional information and guidance

Various jobs will require a range of different outputs. Some graphic files could be output directly as PDF files for printing, while others will require different file formats for different purposes. Most graphic programs will have a range of file outputs to cover most commercial and open formats such as .jpg, .png etc. Learners need to appreciate the differences and similarities in these file formats to choose the best one for the job they are working on. They should also have a clear understanding of the use of compression and understand the difference between lossy and lossless compression and why they might use one over the other. Some applications will have their own format that other applications can't work on, such as Corel Draw files, and learners should appreciate that this is a limiting factor as they will be unable to share and therefore collaborate on materials which is a significant weakness in design processes. Some applications may need to be used for a specific purpose, for example the GIMP package will not create Scalable Vector Graphic files and for this the learners would need to use something like Inkscape.



The key advantage of .svg files is the ability to scale without distortion or an increase in file size as they work with shapes and vectors.

1.6 I can understand the need for compliance with legal issues in designing materials

Learners will work with and understand local and national legal guidelines

Additional information and guidance

Most digital material that learners make, particularly for web based projects, will be publicly available. It is therefore imperative that they abide by laws such as copyright and trademarks so as not to be accused of using someone else's work. The legal penalties for infringement of copyright are very severe and learners need to be creating their own material or at least giving credit to others where appropriate.

Copyright licensing can be very complex. Candidates, however, need to show a basic awareness of how it applies to their work and the images they find and use. Encourage knowledge and support for Creative Commons and public domain sources as this reduces the administrative overhead for everyone.

2. Plan and design digital artefacts for specific purposes

2.1 I can plan designs for a client

Learners will work with a client to plan some designs

Additional information and guidance

A real client will have certain expectations and realistic real world requirements which will be more challenging for learners to work towards. While this will not always be possible, it is desirable.

A local shop or sports team will have a range of requirements that can be met graphically. They may need a new logo designed or perhaps use a design in a number of other publications so need the logo modified in some way and can no longer find the original designer.

Part of the planning process might be to design a questionnaire to gather the required information. For example:

1. What colours do you require in your design and how important are they? (they might have "house colours" that can't be changed)
2. What publications will you use the design on. (flyer, poster, web etc.)
3. Do you want a range of different designs for different purposes? (For example, a local garden centre might want 4 versions of their logo for each season.)

This type of questionnaire can help you plan out what you need to make and help with issues like timescales. It also gives you something to discuss with your client over the design process. In addition it gives a good opportunity for team work as designs would need to be individually produced, but the team needs to work together.

2.2 I can research the best tools to meet the client specification

Learners will demonstrate some research of different tools

Additional information and guidance

Most learners will have a favourite design application that they use, but they need to be flexible as this may not be the package they must use in a future career. Researching and practising with different packages will give a broader set of skills and knowledge and make them more flexibility in terms of jobs. They may also be asked to do something by their client that their current application is not capable of. Some design packages do either raster or vector graphics, but not always both. The client may need a specific type of file that would require very specific software so learners should be open to experiment. As with Office based applications, there should be some commonality of functions and some specific features, but the more they test and discover other applications, the broader their skill set will be.

Application tutorials are a good way to research some of the functionality of the software and see what is achievable with their current skill set.

2.3 I can develop some draft designs for feedback and comments

Learners will show a development process in stages of design

Additional information and guidance

In a very small number of cases, a design created will be exactly what is required for the job, but in most cases it will require a back and forth between the designer and the customer. The first design might well be just a rough sketch and not made on the computer at all. This will then be transferred to the computer application and gradually refined until the final design is approved. Some idea of this process in action will satisfy the needs of this criterion and will probably be part of others in this unit. It may be that the assessor generates a witness statement to say they have seen the developmental process and the reaction to customer feedback, but it would be better coming from the learners as it will show their design thinking and the way they deal with problems. It will also make it easier for later evaluation criteria.

2.4 I can respond to comments and make adjustments before final production

Learners will demonstrate detail in their iterative process

Additional information and guidance

Some evidence is required here that there was some feedback on their designs, at any stage of the development process, and that this was used to make some adjustments. These adjustments might be quite major in that a client suddenly decided that a circle based logo was better than a rectangular one; or they could be more subtle, such as a slightly different tone of blue. These processes are critical in order to get sign off from a client. If the learners just design what they feel is right and spend the money to produce the design only to find out they have missed a key requirement of the customer, that will cost them in time and money.

2.5 I can produce a range of outputs for different purposes and explain their strengths and weaknesses

Learners will demonstrate their overall output and detail some strengths and weaknesses

Additional information and guidance

Most people who work in IT tend to have strengths in certain areas and weaknesses in others. Someone might be excellent at making animation, but be unable to make good logo designs. At a more detailed level, someone might be good at coming up with overall concepts that are eye catching, but unable to work on the fine detail such as shading or reflections.

This criterion is looking for the learner's ability to demonstrate that they are constantly looking to improve their practice in graphic design. As mentioned earlier, it is estimated that professional competence in any discipline will take 10,000 hours of practice. It is unlikely that this stage in their life that learners will be exceptional designers, but they should be aware of what they can do well and what requires more practice or instruction.

It is easy to say what you are good at, but not so easy to admit areas where you are not so good, but you will never improve unless you are prepared to look at areas of weakness.

2.6 I can explain the legal constraints on the designs created

Learners will demonstrate an understanding of legal issues around digital graphics

Additional information and guidance

One of the great strengths of digital in general is that it is easy to get anything you want. Search engines like [DuckDuckGo](#) [3] allow a learner to find anything on the Internet and download it. This makes it all too easy to plagiarise someone else's ideas. In open source circles, there is a push to try and encourage the remixing of materials to make something new, though learners should always consider legal issues such as copyright and always try to use royalty free or Creative Commons based materials if they have to borrow.

https://en.wikipedia.org/wiki/Remix#Copyright_implications [4]

A good starting point for graphic images is the [Open Clip Art](#) [5] site which has free to use and in most cases free to distribute materials.

Students can put some of these legal issues into their own words or at least incorporate into their designs some aspect of their legality.

3. Evaluate effectiveness of designs by self and others

3.1 I can evaluate the effectiveness of my plans against set objectives

Learners will reflect on how well their end product meets the original needs and objectives

Additional information and guidance

Having used a plan and hopefully incorporated some SMART targets, learners should be in a good position to evaluate the different aspects of their project in terms of what worked and what could be improved. The measures will probably be of two broad types:

Quantitative - based on some measures, such as 1 week to complete a design or 20 lessons (so 20 hours) to refine skills in digital manipulation.

Qualitative - aesthetic or personal measures. It was very eye catching, people commented on the impact it made on them.

Learners can use these types of measures, or others, to reflect on their own effectiveness.

For example: "I set myself a week to complete the central shape of my log, but actually completed it in 3 days which gave me time to get more feedback from the client to improve it further. They commented that it really "jumped off the page", so I was pleased with my work, but I still think the underlying shape could have been better as it was not as smooth as it could be, but I will improve my software control skills for next time".

3.2 I can summarise my research findings

Learners will demonstrate an appreciation of the value of research

Additional information and guidance

Learners will likely use a lot of other people's support materials to achieve their final goals and need to reflect on how beneficial this was or if it was too much of a distraction. For example, they might find an excellent tutorial on making some animated designs and spend many hours on the tutorial only to conclude that it is beyond their current skill level. They can summarise that this would be a useful resource in the future but has shown them the limitations of their current skill set so they have a better idea of what they can and can't do when pitching ideas to clients.

3.3 I can evaluate and reflect on my designs and respond to client feedback

Learners will demonstrate how to respond to feedback positively

Additional information and guidance

Getting feedback on work that you have spent hours on is sometimes painful, but necessary. When you are working for someone who is paying you for your expertise, that is what they expect and as they are paying you, they will expect to have the final say. It is good to get into an early habit of appreciating that though not always true, the customer will always think they are right. If you do not agree with them, you will need to justify it very strongly. Sometimes, for the sake of a long term relationship, it might be worth backing down and doing what is asked, even if you think it is the wrong choice.

Learners will begin to develop an iterative approach to their development work and start to think more critically and reflectively on their designs, particularly in terms of client feedback. It is highly likely that a client will change their mind completely days before a deadline which will mean long nights of work to implement the required changes. Having a detailed and critical log discussing the process will be hugely helpful. Many designers work long hours and may well come across something by accident and use it and then forget where it came from. In this case, making notes to remind yourself of what you did, how, when and why will help with any later modifications that may arise.

3.4 I can evaluate the strengths and weaknesses of my design process

Learners will evaluate the effectiveness of what they did

Additional information and guidance

Your working practices should evolve and improve during the course of this unit work and it should be easy to see points where improvements or backward steps were made. This will help with future work to make sure that time is used effectively or tools are used to their optimum because you have already determined these facts. Constantly re-doing something because you have not made notes about it is hugely wasteful of time and energy. When you are working and are being paid for what you produce, wasting time on things that you should know are not effective is like throwing money away.

A weakness is not something that is necessarily “weak” in the sense that it is useless, but might be weak because it needs using in a certain way to be effective. This type of subtle distinction should be shown in the notes made about a learner’s practice.

3.5 I can analyse the best file formats required for different tasks

Learners will make recommendations on file types and formats in relation to their work

Additional information and guidance

Learners will investigate and explore many different types of files and formats for different purposes and should therefore have a good understanding of when and where to use them.

As part of the process, learners may well make recommendations to their client such as using .png files to ensure background transparency in logos or the use of .jpg files on websites to maximise the download time etc.

It might be useful to create a table of features and recommendations.

File type	Characteristics	Recommended use
.jpg	Can be heavily compressed and uses lossy compression so not good on high detail	Good for web sites where low download speeds are the norm. Also good to embed in documents to minimise the final file size.
.png	Higher quality than .jpg, for example. Uses lossless compression, so better quality.	Good for using with a transparent background and overlaying other material.

3.6 I can analyse the legal restrictions on the design process

Learners will show an understanding of legal restraints on their work

Additional information and guidance

In an earlier criterion, learners will have given an overview of the different legal restrictions on working with digital media. In this criterion, they will need to make some judgements on what impact this has had. Have they been restricted in what they can do by these laws? Are the laws beneficial to them and acceptable? Did it hamper their process and if so, in what way?

Source URL: <https://theingots.org/community/sil2u83x>

Links

- [1] <http://www.fileformat.info/tip/web/imagesize.htm>
- [2] <https://www.gimp.org/tutorials/>
- [3] <https://duckduckgo.com/>
- [4] https://en.wikipedia.org/wiki/Remix#Copyright_implications
- [5] <https://openclipart.org/>