**NZQA**

**Approved**

Achievement standard: 91072 Version 3

Standard title: Demonstrate understanding of basic concepts of digital media

Level: 1

Credits: 3

Resource title: Engineering video

Resource reference: Digital Technologies VP-1.42 v2

Vocational pathway: Manufacturing and Technology

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| Quality assurance status | These materials have been quality assured by NZQA.  NZQA Approved number A-A-02-2015-91072-02-7340 |
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Vocational Pathway Assessment Resource

Achievement standard: 91072

Standard title: Demonstrate understanding of basic concepts of digital media

Level: 1

Credits: 3

Resource title: Engineering video

Resource reference: Digital Technologies VP-1.42 v2

Vocational pathway: Manufacturing and Technology

Learner instructions

# Introduction

This assessment activity requires you to demonstrate understanding of the basic concepts of digital media integrated into an engineeringvideo.

You are going to be assessed on how comprehensively you understand the basic concepts of digital media integrated into the New Zealand Engineering News video.

The following instructions provide you with a way to structure your work so you can demonstrate what you have learnt and achieve success in this standard.

Assessor/educator note: It is expected that the assessor/educator will read the learner instructions and modify them if necessary to suit their learners.

# Task

As you research the engineering video, make notes about:

* the communication purpose of the video
* the digital media types used in the video
* the design elements used in the video
* the distinguishing characteristics (the features) of the video
* how and why these characteristics support the communication purpose of the video
* the software resources used to create the video
* the techniques used to develop the video
* the technical quality of the video
* why the software resources and techniques were used to create the video and the effect they have had on its technical quality
* ethical considerations that are relevant to the creation of a video

• why these ethical considerations were important in the creation of the New Zealand Engineering News video.

Use your research notes to prepare a portfolio or a presentation that demonstrates your comprehensive understanding of basic concepts of digital media outcomes. Include annotated screen shots to illustrate the key points of your discussion.

Create a presentation in which you:

• identify the digital media types in the video

• give the names of the main software applications that may have been used to create the video and how the main features of these have been used in the creation of the video

• describe the target audience and reasons why the video has been created (communication purpose)

• describe the way the different types of digital media and design elements have been integrated into the video (distinguishing characteristics)

* describe how, and discuss why, the way different types of digital media and design elements (distinguishing characteristics of the digital media outcome) have been integrated into the video support its communication purpose

• describe the techniques used and the design elements in the video. Design elements may include colour, line, shape, texture, clarity, scale, contrast, space, and proximity. Techniques are methods used within the applications to create the video

• explain how and discuss why software resources and techniques were used to create the digital media outcome, and how they affected its technical quality

• explain the ethical considerations related to the video, their importance, and explain why they are important. Ethical considerations may include privacy, licensing, intellectual property, copyright and social implications.

Make sure you acknowledge all sources of information.

# Resources

Suitable videos for an engineering context may be found in a number of sources. You need to check with your assessor/educator whether the video you choose is suitable for this assessment.

Some possible places to start are:

<http://www.sciencekids.co.nz/videos/engineering/carengine.html>

<http://www.sciencekids.co.nz/videos/engineering/leonardodavincicar.html>

Engineers, Inspiring a New Generation of What If<http://www.youtube.com/watch?v=XGO04IF8Eac>

How Stuff works.com

<http://www.youtube.com/user/MITK12Videos>

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Assessor/Educator guidelines

# Introduction

The following guidelines are supplied to enable assessors/educators to carry out valid and consistent assessment using this internal assessment resource.

As with all assessment resources, education providers will need to follow their own quality control processes. Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material. Using this assessment resource without modification may mean that learners' work is not authentic. The assessor/educator may need to change figures, measurements or data sources or set a different context or topic. Assessors/educators need to consider the local context in which learning is taking place and its relevance for learners.

Assessors/educators need to be very familiar with the outcome being assessed by the achievement standard. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing learners against it.

# Context/setting

This activity requires learners to demonstrate comprehensive understanding of the basic concepts of digital media integrated into an engineering video.

You may wish to provide learners with a video or allow the learner to choose their own. You need to check that the video contains sufficient depth of material to allow learners to meet the requirements of the standard, for example the video contains some of audio, animation, still images.

Learners present their findings as a presentation or a portfolio.

This assessment activity could be done in preparation for, or reflection on developing a digital media outcome.

# Conditions

This is an individual assessment task.

# Resource requirements

Learners will require access to an internet-enabled computer.

# Additional information

Learners need to recognise and understand ethical considerations. When selecting the digital media outcome for this assessment activity, make sure the ethical issues are obvious.

Learners could also consider ethical issues from a designer’s perspective. For example, would they develop a digital media outcome for a product that is not ethical?

# Assessment schedule: Digital Technologies 91072- Engineering video

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner demonstrates understanding of basic concepts of digital media used in an engineering video by:  • identifying the digital media types in an engineering video  For example:  The learner identifies examples of the actual media types used in the video. These may include audio, graphics, animation or still images.  The learner identifies soundtracks, still images, and motion graphics.  • describing the software resources used to create the digital media outcome  For example:  The learner describes the different types of software that may have been used in the creation of the video and has given some features of the software.  *Audacity, a sound editing tool, was used to capture and edit the soundtrack. This software allows users to record sound and to do some basic editing to prepare the sound for insertion into the video.*  • describing techniques used to create a specific digital media outcome  For example:  The learner describes techniques that have been used in the software to enable the video to be created*.*  *iMovie was used as it enabled the creation of the titles and credits using the title tools in the software. The application allows the video to be imported from the camera and then allows different bits of video to be joined using trim editor and a soundtrack overlaid using the timeline feature.*   * describing design elements in the digital media outcome   For example:  The learner describes design elements which may include colour, line, shape, texture, clarity, scale, contrast, space, and proximity.  *The video uses careful lighting so that various objects in the video have good contrast. The backgrounds around the milling machine are clear and free from clutter and use neutral colours to enable the viewer to not be distracted from the operation of the machine.*  *The video is framed to allow the viewer to be able to understand the content without distraction.*   * describing the communication purpose of the digital media outcome   For example:  The learner describes what the purpose of the video is and who the video is intended for.  *The video was designed to teach people how to use the milling machine safely. It was intended for use by the end-users of the machine.*   * describing the ethical considerations related to the digital media outcome   For example:  The learner describes some of the ethical considerations which may include: privacy, licensing, intellectual property, copyright, and social implications related to digital media.  *The music in the video has been composed especially for the video. The video is meant to show the safe use of the milling machine so the video has no unsafe working practices shown, for example any people in the video are wearing the appropriate personal protective equipment.*  The above expected learner responses are indicative only and relate to just part of what is required. | The learner demonstrates in-depth understanding of basic concepts of digital media used in an engineering video by:  • identifying the digital media types in an engineering video  For example:  The learner identifies examples of the actual media types used in the video. These may include audio, graphics, animation or still images.  The learner identifies soundtracks, still images, and motion graphics.   * explaining how software resources and techniques used affected the technical quality of the digital media outcome   For example:  The learner describes the different types of software that may have been used in the creation of the video and has given some features of the software.  The learner also explains how such editing is necessary for the finished product.  *Audacity, a sound editing tool, was used to capture and edit the soundtrack. This software allows users to record sound and to do some basic editing to prepare the sound for insertion into the video.*  *GIMP, a photo editing tool, was used to edit the static images used in the titles. The tools in GIMP were used to remove distractions such as damage and colour variations. GIMP was also used to resample the picture to a suitable size and resolution for inserting into the video.*  The learner explains how trim editor is used in iMovie to get a seamless join between different parts of the video.  The learner explains how the software and techniques allowed this to happen.   * describing design elements in the digital media outcome   For example:  The learner describes design elements which may include colour, line, shape, texture, clarity, scale, contrast, space, and proximity.  *The video uses careful lighting so that various objects in the video have good contrast. The backgrounds around the milling machine are clear and free from clutter and use neutral colours to enable the viewer to not be distracted from the operation of the machine.*  *The video is framed to allow the viewer to be able to understand the content without distraction.*   * describing how the distinguishing characteristics of the digital media outcome support its communication purpose   For example:  The learner explains what the purpose of the video is and who the video is intended for. They explain some of the features of the video that support the communication purpose.  *The video was designed to teach people how to use the milling machine safely. It was intended for use by the end-users of the machine. The video has close up shots which illustrate some of the dangers of using a milling machine.*   * describing the importance of the ethical considerations applied in the creation of the digital media outcome   For example:  The learner describes the importance of the ethical considerations which may include: privacy, licensing, intellectual property, copyright, and social implications related to digital media.  *The credits in the video indicate that the music in the video has been composed especially for the video. If the video used someone else’s music, permission would need to be sought to use it or the maker of the video could be sued by the owner of the music.*  *Showing people behaving in a safe manner and wearing the correct personal protective equipment is important as employers can be sued if people are injured when working.*  *The above expected learner responses are indicative only and relate to just part of what is required.* | The learner demonstrates comprehensive understanding of basic concepts of digital media used in an engineering video by:  • identifying the digital media types in an engineering video  For example:  The learner identifies examples of the actual media types used in the video. These may include audio, graphics, animation or still images.  The learner identifies soundtracks, still images, and motion graphics.   * describing design elements in the digital media outcome   For example:  The learner describes design elements which may include colour, line, shape, texture, clarity, scale, contrast, space, and proximity.  *The video uses careful lighting so that various objects in the video have good contrast. The backgrounds around the milling machine are clear and free from clutter and use neutral colours to enable the viewer to not be distracted from the operation of the machine.*  *The video is framed to allow the viewer to be able to understand the content without distraction.*   * discussing why software resources and techniques were used to create the digital media outcome and how they affected its technical quality   For example:  The learner compares and contrasts alternative software resources and techniques that may have been used in the creation of the video and gives reasons why one might be better than another to produce the video.  The learner compares different video editing tools and has a conclusion why one is better than the others.  *iMovie is better than Microsoft Movie Maker because, whilst both are entry level products made by Apple and Microsoft, iMovie is able to create movies in High Definition whereas Movie Maker cannot. iMovie has tools that allow the accurate trimming of video clips to allow seamless video. This can be achieved in Movie Maker but is more difficult.*  The learner discusses how the selection of the software resources and techniques affects the completed technical quality of the engineering video.  *Using Adobe Premiere has allowed a professional video that integrates all of the media types and has allowed the Safety video to be edited in a professional manner adjusting scenes, adding music to enhance the video, and allowing accurate synchronisation of the voice over. The software has raised the technical quality by ensuring that the video is seamless, the soundtrack is synchronised, and that the effects used are minimal but appropriate.*   * discussing why the distinguishing characteristics of the digital media outcome support its communication purpose   For example:  The learner discusses what the purpose of the video is and who the video is intended for. They discuss some of the features of the video, the way that the media types have been integrated and how that supports the communication purpose.  *The video was designed to teach people how to use the milling machine safely. It was intended for use by the end-users of the machine.*  *The video has close up shots which illustrate some of the dangers of using a milling machine. The video has also used some animations to illustrate parts of the machine that cannot be seen in a normal video. The animations help the viewer to understand how the machine works.*  • explaining why ethical considerations were important in the creation of the digital media outcome  For example:  The learner explains the importance of the ethical considerations which may include: privacy, licensing, intellectual property, copyright, and social implications related to digital media.  *It is necessary that the elements of the video are all the makers own work or permission has been sought to use these to avoid any copyright issues. The video was taken by the milling machine manufacturer and in the credits all of the people involved in making the video have been identified. If the maker of the video had used materials from the internet or music which was copyrighted they would need to seek permission to use it or they may be sued. The video is meant to show the safe use of the milling machine so the video has no unsafe working practices shown, for example any people in the video are wearing the appropriate personal protective equipment.*  *Showing people behaving in a safe manner and wearing the correct personal protective equipment is important as employers can be sued if people are injured when working.*  *The above expected learner responses are indicative only and relate to just part of what is required.* |

Final grades will be decided using professional judgement based on an examination of the evidence provided against the criteria in the Achievement Standard. Judgements should be holistic, rather than based on a checklist approach.