NCEA Level 2
DIGITAL TECHNOLOGIES & HANGARAU MATIHIKO

Teaching and learning programme

Tourism in your region

MINISTRY OF EDUCATION
TE TĀHUHU O TE MĀTAURANGA

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Summary of the teaching and learning programme

This programme will focus on how knowledge about the world and other cultures relates to a local region in terms of the tourism and activities on offer to international visitors. Knowledge about the similarities, differences and relations between cultures helps people to challenge misinformation and stereotypes about other countries and people, and thus counters intolerance and oversimplified representations of the world. This teaching and learning programme encourages teachers to engage students in researching local tourism and exploring who the main visitors to their region are. Students are then asked to devise a print advertising campaign aimed at increasing visitor numbers of a target country using their cultural identity.

By the end of this teaching and learning programme, students will be able to:

- use skills in InDesign or Illustrator, and Photoshop to create documents that include merged data

- understand the basic graphic design principles and how to apply these to their work

- understand resolution, CMYK colour spaces and why these are important to print design

- design and generate a range of ideas for a print outcome

- create a data merge that generates more than one print outcome from a template.

Duration

If students have never used the software before, you would need to allocate two terms to this project. If they are competent in the software, then one term (10 weeks) should be sufficient.

Students are guided through a design and development process. Within the process, they are exposed to the concepts of modelling (trialling and testing) and using feedback to improve on their ideas.

Alignment to the New Zealand Curriculum

DDDO – Designing and Developing Digital Outcomes: Progress outcome

In authentic contexts and with support, students investigate a specialised digital technologies area (for example, digital media, digital information, electronic environments, user experience design, digital systems) and propose possible solutions to issues they identify. They independently apply an iterative process to design, develop, store and test digital outcomes that enable their solutions, identifying, evaluating, prioritising and responding to relevant social, ethical and end-user considerations. They use information from testing and, with increasing confidence, optimise tools, techniques, procedures and protocols to improve the quality of the outcomes. They apply evaluative processes to ensure that the outcomes are fit for purpose and meet end-user requirements.

Links to other learning areas

Design and visual communication (Use visual communication techniques to generate design ideas)

Tourism

Social sciences

Teaching and learning pedagogy

Teacher-guided project learning. It would suit a flipped classroom setting.

Prior knowledge and place in the learning journey

Students would benefit from being competent in Adobe InDesign or Illustrator prior to starting this project (or at least used this software previously). However, this is not essential. If students are new to the software, they will need more time to work through the software skills. Students would benefit from a basic knowledge of the principles of graphic design (contrast, repetition, alignment, proximity, balance) and how to apply them to their work.

Resources required

Adobe InDesign

Adobe Photoshop

Access to a printer and paper
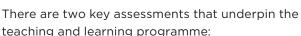
Resources provided including tutorials

How might you adapt this in your classroom?

This programme of work could easily be adapted to suit a range of outputs. It does not have to be a tourist outcome. For example, badges, invitations, cards and top trumps games would all suit a printed data merge task. Global competency knowledge can be used and applied to other outcomes, such as creating recipes and designing magazines.

This programme of work could also be adapted to cover the external Achievement Standard 91899 (present a summary of developing a digital outcome).

Assessment

There are two key assessments that underpin the teaching and learning programme:

- AS91891 Apply conventions to develop a design for a digital technologies outcome
- AS91893 Use advanced techniques to develop a digital media outcome.

TERM OUTLINE

Specific learning outcomes (may include what will be covered)	Duration (hours)	Learning activities	Resources provided
Understand tourism in their area	5	• What are the tourist attractions? • Who are the main visitors? • Who are least likely to visit? • Can you find out why? • Who will you focus your design for? • What types of images best suit this end-user? • Where can you find these images? • What sort of cultural aspects might you need to consider?	Create your own space to record your research
Introduction to bitmap images. • What are they? • What is resolution? Why is resolution important? (implications and conventions) Introduction to Photoshop (or alternative bitmap software) and basic skills	5	• Introduction to the Photoshop workspace • Basic introduction to Photoshop tools and skills (if they don't already have these), using the website • Selection tools, combining selections, layer mask, cropping.	Introduction to Photoshop tutorial (Beginner selections course) Print Conventions and Implications reading material

Teacher note: https://helpx.adobe.com/nz/photoshop/tutorials.html has some excellent tutorials as well as projects with images that students can download and use. These are suitable for total beginners as well as advanced students. Give students two or three tutorials to work through so that they can do the basics well, then let them choose a project to do that interests them and develops their skills further. They can come back to this website later if they need to get new skills for the images that they choose for their final outcome.

Specific learning outcomes (may include what will be covered)	Duration (hours)	Learning activities	Resources provided
Vector software (InDesign or Illustrator recommended, but other alternatives also able to be used.) Conventions and implications: colour space (CMYK vs RGB), fonts (types of fonts)	5	• Introduction to the workspace • Using the selection tools, adding images to your page.	InDesign tutorial or Illustrator tutorial Print Conventions and Implications reading material
Vector software – why paragraph styles are important and how they work. Using layout guides and text boxes.	5	Working with text: paragraph styles, character styles, choosing fonts.	Print Conventions and Implications reading material
Basic design principles	5	Business card and music poster task	Introduction to Basic Design Principles
Research and initial design stage	6–9 hours		
Research	2–3	Determine end-user requirements, initial conceptual designs and sketches. • What tourist attractions are there? • Who are the main visitors to the region? • What are their needs and wants? • What cultural aspects might you consider?	Project logbook or your own chosen space
Design and development	2–3	What conventions need to be applied? Cover more detailed concepts.	Project logbook, blog, Indesign or Illustrator (or other software)

Specific learning outcomes (may include what will be covered)	Duration (hours)	Learning activities	Resources provided
Feedback and prototype	2–3	Create a Google form or other feedback recording method. Plan and obtain feedback. What needs changing? Refer back to your requirements, conventions and implications. Developments/prototypes created.	Project logbook, blog, Indesign or Illustrator (or other software)
Development stage	12–15 hours		
Trial data merge	3-4	Complete a trial data merge with resources provided. Make sure that students can follow the process. Iron out any issues that arise.	Creating a Data Merge in Illustrator InDesign Data Merge
Create first data merge of your outcome. Trial and test.	2-3	Print out the first couple of pages of the data merge. You may not want to do the whole data merge, depending on the number of pages and the cost of printing. Tests will include readability, legibility, image quality, layout, font choice, image choice, spelling, content etc.	
Explain relevant implications and conventions	1	Explain any implications and conventions that you followed – anything that needed changing and why it changed. Explain your design choices (colours, fonts, images, layout, size, orientation etc) as well as the information that is on the outcome: • How did you check that it was accurate? • Did you need to put a map or location on there? Why?	Project logbook
Refine and improve (new designs)	2–3	What refinements did you need to make? Why? How did this improve the outcome for the end-user?	InDesign or Illustrator
Trial and test	1–2	Consider: resolution, legibility, layout, image choice, image size, colour choice font choices etc.	

Specific learning outcomes (may include what will be covered)	Duration (hours)	Learning activities	Resources provided
Refine and improve	1–2	What refinements did you need to make? Why? How did this improve the outcome for the end-user?	
Explain relevant implications and conventions	1	As above	
Trial and test	1	As above	
Final outcome	1–2 hours		

ASSESSMENT TASK : TOURISM IN YOUR REGION

Curriculum key concepts	*Designing and developing digital outcomes (PO5)*
Achievement standard(s)	91891 Apply conventions to develop a design for a digital technologies outcome 91893 Use advanced techniques to develop a digital media outcome
NCEA Level	2
Credits	3 credits (91891) 4 credits (91893)
Learning time guidance	For both tasks, two terms (if new to the software). If experienced with the software, one term would be enough. At least 4 weeks of in-class time for the assessment task.
Length guidance if appropriate	Two backed pages
Due date	Teacher to insert

Achievement criteria

AS91891

Achieved	Merit	Excellence
Apply conventions to develop a design for a digital technologies outcome	Apply conventions to develop an informed design for a digital technologies outcome.	Apply conventions to develop a refined design for a digital technologies outcome.

AS91893

Achieved	Merit	Excellence
Use advanced techniques to develop a digital media outcome.	Use advanced techniques to develop an informed digital media outcome.	Use advanced techniques to develop a refined digital media outcome.

ASSESSMENT TASK : TOURISM IN YOUR REGION

Your task:

You are going to design and create a template for a printed document about tourist attractions in your region. The document could be a folded brochure, a poster (A1, A3, A4 or other size) a flyer (eg, DLE size) or any other printed document that you can create that will advertise your selected attractions to the target audience. You will need to decide what best suits your target audience, consider cultural aspects and determine your specifications.

If you prefer, you can use the following specifications:

End-user specifications:

- Size must be A4 tri-fold document, printed front and back
- 2 pages (front and back)
- Colour – CMYK, Resolution – 150-300dpi
- Your outcome will be to a high standard (completed, correct grammar, appropriate resolution of images, font choices)
- All text must be legible
- All text must be assigned to a paragraph style.

The printed document will appeal to a specified target audience from a specified country, with research to back up your choice of images, colours, fonts and text.

You will then create a range of documents based on this template, created from a data merge. It will take images from Photoshop and insert them into either an InDesign or an Illustrator file through a CSV file created with Excel or Google sheets.

You will be assessed on the design process, the iterative improvement throughout the development and testing process, and your use of efficient tools and techniques in the outcome's production.

You will need a minimum of three different tourist attractions for the region.

What you need to think about before you begin this assessment:

You will research tourist attractions in your area and find out which are the most common countries visitors come from. You will then choose one of these countries and design your material for people from this country.

An alternative approach is to find a country where few visitors come from, discover why they don't visit your region, and then try to encourage more people from that country to visit this region by aiming your promotional material specifically at that target audience.

You will need to:

- describe the purpose and what the end-users might require
- apply appropriate data integrity and testing procedures while developing your final document
- use and apply relevant conventions to improve the quality of the outcome
- explain and address relevant implications
- demonstrate iterative improvements throughout the design, development and testing of your outcome
- use efficient tools and techniques in the outcome's production.

ASSESSMENT TASK : TOURISM IN YOUR REGION

Print conventions include:

- correct colour mode (CMYK/RGB)
- correct resolution
- image size
- type of images chosen
- hierarchy of text/images
- basic graphic design (hierarchy, repetition, contrast, alignment, proximity, balance) has been followed.

Type conventions include:

paragraph styles, character styles, text alignment, hierarchy, appropriate font choice.

Efficient tools and techniques could include:

paragraph styles, colour swatches, creating a CSV file, data merge layout and development, images correct size (so no resizing needed in data merge), creating the template in InDesign (or Illustrator) and using the data merge tool to create multiple copies with different content.

Testing procedures could include:

mock-ups, gaining relevant feedback from new users, checking for data errors, testing fonts, testing different colour combinations, testing different compositions, checking for resolution, spell-checking.

Data integrity could include:

- checking that information is accurate
- checking that language use is appropriate
- checking that data is relevant to the purpose and end users
- images are saved at the correct resolution
- images are the correct colour mode
- files/folders are appropriately named and ordered.

Explain relevant implications:

You need to identify and explain the implication and its relevance/impact on the outcome. These could include an explanation of why your outcome meets these criteria:

- socially and culturally acceptable
- legal in terms of ethical and intellectual property
- aesthetically pleasing
- functional (suitable for the end-users) and as a publication
- accessible to all end-users and how
- considers privacy (no names/personal details published without permission)
- considers usability
- Sustainable and future-proof

You should show how you have described and addressed these implications.

Iterative improvement

You will use an iterative process throughout the design, development and testing stages to improve your design and produce a high-quality outcome. This can be thought of as working in small cycles of the design process for each stage to design, refine, test and evaluate to improve your outcome. Show at each stage how you initiated your design, tested it, refined and developed it before moving on to the next stage. Some proof of this process is required. It could be screencasts, screenshots, or a log of what you did at each stage.

What you need to do (follow these steps):

1. Select a target audience (end-user) and describe what their needs are.
   - What type of images appeal to them?
   - What colours do they prefer?
   - Do they prefer images with people, landscapes, rivers, mountains, activities, towns etc?
   - What regions do your target audience prefer?
   - How do you think you will get them to visit your region (how will you appeal to them to visit your region?)

2. Select an appropriate context for your document, describe the purpose of your document and the requirements of the end-users. You need to explain any relevant implications.

3. Research other printed tourist materials and design ideas, then investigate and explain relevant conventions to inform the development of your outcome. Relevant conventions may include:
   - how your design ensures that the resulting document will be fully functional and easy to use. This includes layout, language used, size, images chosen, colour mode used (CMYK/RGB), resolution of images, types of fonts etc.
   - how your chosen aesthetic elements are appropriate for your end-users
   - how the graphic design elements are applied to the printed materials (contrast, repetition, alignment, proximity, balance, harmony).

4. Generate and model three or more design ideas using conventions. These conventions may include visual hierarchy, contrast, repetition, harmony etc. Annotate your designs, explaining what you were trying to achieve.

5. Get feedback on your initial designs.

6. Use the feedback from modelling to improve your initial design. Explain what changes you made and why you made the changes. *Relate these changes back to your end-users, conventions and requirements wherever possible*.

7. Select a design and explain the appropriateness of the design.

8. Justify how your chosen design addresses relevant implications, end-user considerations and uses appropriate conventions. You might wish to consider:
   - how privacy, ethical and/or intellectual property issues have been addressed and why they are important
   - how your design ensures that the resulting document will be fully functional and easy to use, eg, resolution, font choices, colour mode, basic design principles – how you made sure that these were chosen carefully and how they best meet the needs of your end-users
   - how your chosen aesthetic elements are appropriate for your end-users, eg, colours, types of images, size of images, hierarchy of text.

9. Create a final template based on your chosen design. Your document must demonstrate advanced skills and techniques as you implement or integrate components such as:
   - different media (eg. Images from Photoshop)
   - text relevant for each attraction from the CSV file
   - paragraph styles, master pages, linked text boxes
   - the data merge itself is an advanced skill and technique.

10. Carry out key testing procedures during the development of your document. For example, you should:
    - test your document to ensure that it merges all images and text correctly
    - ensure that text boxes have no overset text
    - check there are no spelling errors
    - test that your document has met relevant design conventions
    - test that the design appeals to the target audience according to the research that you completed
    - check that you have the correct number of pages in your document (ie, if you have created 6 documents, that you have 6 files created from the data merge).

11. Document (through providing screenshots or a screencast) the iterative improvement of the design and development of your final outcome. Document what has been tested, the ongoing iterative improvements and edits you have made to the design and document. Include annotations of why you made edits or improvements.

12. Identity and explain each implication and its impact on the outcome. Show that implications have been explained and addressed. This could include an explanation on why your outcome needs to:

   – be socially and culturally acceptable

   – honour legal, ethical and intellectual property obligations

   – be accessible, usable and functional

   – be sustainable and future-proof

   – effectively use design conventions.

What you will hand in:

Submit your completed outcome and the following documentation:

- **Design ideas, modelling, user feedback, final design, explanations and justifications**. This would generally include a series of wire-frames and mock-ups showing a range (three or more) of potential layouts, colours, fonts etc. This section should also include feedback from modelling, evidence of refining the design and justifications related to how the design is suitable for the target audience and why you made the design decisions as part of your process.

- **Testing.** Screenshots or a screencast showing that the template has been tested and works as expected. Provide before and after screenshots to show how the template has been improved.

  Note: Testing can be done by making a brief screencast showing the outcome being comprehensively tested. You can take screenshots of your testing and annotate them. Alternatively, you can submit a screencast and talk through your testing procedures as you work through the development of your document.

- You should show how you have explained and addressed any implications.

ASSESSMENT SCHEDULE

AS91891 APPLY CONVENTIONS TO DEVELOP A DESIGN FOR A DIGITAL TECHNOLOGIES OUTCOME

Programme 4: Tourism in your region
Credits: 3 (Internal)

Final grades will be determined on a holistic judgment of the evidence against the achievement criteria.

CRITERIA	JUDGMENTS	COMMENTS
Described the purpose of the outcome	How the document will be used is outlined. *For example: The brochure describes what the tourists can do at the attraction, the location, how to get there, the costs and a brief history of the attraction.*	
Investigated and applied relevant conventions	There is evidence of design conventions (evidence provided of research, and/or trialling ideas, group logs of discussion, teacher observations provided, etc) at least 3 chosen conventions are visible in their evidence.	
Described the requirements of the end- users	The requirements of the end-users have been outlined. For example, how will they use the document (where it will be placed) how it will be viewed, what information they will need to get from it (location, price, what they can do at the tourist attraction). *The brochure will be placed amongst other similar brochures at the local information centre. It will be free of charge, it will have images that appeal to the end-users to get them to go to the attraction, and it will tell them what they can do expect when they get there.*	
Received feedback on design ideas	Evidence of feedback sighted – Google forms summary or similar.	
Generated and modelled design ideas	A series of possible layouts created. For example a model template is created that shows most of the aesthetic and functions features. For example, the student has experimented with different colour, fonts, layouts, images.	
Selected final design from the initial concepts and explained the appropriateness of the design	There is a clear indication of which concept will be used as the final design. An explanation has been given as to the appropriateness of the design in relation to the requirements of the end-users, print conventions and implications such as aesthetics, cultural, legal etc.	

ASSESSMENT SCHEDULE

AS91891 APPLY CONVENTIONS TO DEVELOP A DESIGN FOR A DIGITAL TECHNOLOGIES OUTCOME

Programme 4: Tourism in your region
Credits: 3 (Internal)

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CRITERIA	JUDGMENTS	COMMENTS
Explained relevant implications	There are at least two implications explained. Students have identified and explained the implications and the impact of the implications on the design of the outcome (ie, must give reasons). The explanation must be linked to student outcome and not abstract or generalised. For example, the outcome is: easy to use, functionally as expected, aesthetically pleasing, copyright compliant (or other appropriate legal obligation).	
Described requirements of end-users	Requirements of end-users have been described. This may include the use of language appropriate to tourists who may have English as a second language. The document needs to be easy to read and have the important information, such as contact details, address, maybe a map in a clear, obvious place so the tourists (end-users) can see at a glance if it is in the area they want to visit.	
Used feedback gained from modelling to improve the design	Further design ideas have been generated from the modelling and feedback. Initial designs are developed further. Further concepts or mock-ups may be provided, or notations made on the initial designs, eg, font size needs to be increased or decreased or an image needs to be made bigger, along with an explanation of how this makes the document design more effective.	
Explained how the chosen design addresses implications, end-user considerations and uses appropriate conventions	How has the student addressed social and cultural implications? For example, appropriate use of colours, text, images for the end-users. Functionality – how will it stand out in the environment where it will be displayed? Is the layout, colour, size appropriate? Does it have all of the necessary information? (Can a tourist pick it up, or view it, and know where to go, how much it will cost, and what they can do there?) Does the document follow the basic design principles of contrast, harmony, alignment, balance, proximity? Students must EXPLAIN which conventions they followed (used) eg, their resolution, their design principles, focal point etc.	

ASSESSMENT SCHEDULE

AS91891 APPLY CONVENTIONS TO DEVELOP A DESIGN FOR A DIGITAL TECHNOLOGIES OUTCOME

Programme 4: Tourism in your region
Credits: 3 (Internal)

Final grades will be determined on a holistic judgment of the evidence against the achievement criteria.

CRITERIA	JUDGMENTS	COMMENTS
Investigated relevant conventions	At least two conventions investigated (contrast, repetition, alignment, proximity, readability, legibility, visual hierarchy etc).	
Created at least three design ideas	Three conceptual designs produced. Showing images and text, size of text and type of font (serif, sans-serif, display etc.)	
Selected the final design idea with explanation	Explanation includes layout decisions (design principles discussed in the conventions above). Design ideas have been modelled.	
Explained and addressed relevant implications	There is an explanation of how at least two implications have been addressed and justified. *For example: "I have made sure that all images used are creative commons, with an attribution licence. I have attributed my photos in the document at the bottom of the page." "I have made sure that the information on the document is accurate by checking with the proprietor as well as double-checking with other sources, and there is a date on the document to show when it was produced." "I have made sure that the language I used was appropriate for an international audience, by not using any jargon and trying to keep the language as simple as possible."*	
Justified conventions used	At least two conventions have been justified. The justification shows how the design addresses relevant implications, end user considerations and uses appropriate conventions."*I have increased the font size of my headings to show their importance (hierarchy) and draw attention to the headings, so that readers can easily skim the information to find the parts that they are most interested in." "I have used repetition of colour from the logo with black to show contrast and to tie all of the elements together." "I have chosen images that include happy, smiling people, because my research showed that very few German tourists visit the attraction, I am trying to appeal to them as end-users, and German tourists like to see images of people as well as the physical location. By using images that appeal to their aesthetic, I hope to increase the numbers of visitors from Germany."*	

ASSESSMENT SCHEDULE

AS91893 USE ADVANCED TECHNIQUES TO DEVELOP A DIGITAL MEDIA OUTCOME
Programme 4: Tourism in your region
Credits: 4 (Internal)

Final grades will be determined on a holistic judgment of the evidence against the achievement criteria.

CRITERIA	JUDGMENTS	COMMENTS
Used appropriate tools	Appropriate software and hardware have been used for the required outcome (eg, InDesign, Illustrator for the template, Photoshop for the images). Appropriate tools used within the software, eg, paragraph styles, adjustments made in Photoshop, selection tools used, images cropped correctly, master pages used if necessary etc. The text is readable, legible and follows design.	
Used appropriate techniques	Appropriate techniques have been used for the outcome, eg, CSV file created, paragraph styles, colour swatches used, data merge palette utilised (each document not created individually but as part of a data merge).	
Applied appropriate data integrity and testing procedures	The document has been proofed and has no spelling errors. Data is accurate relevant to the purpose and end users and in the correct place on each document. Images are the appropriate colour space (eg, CMYK), no overset text, language is suitable for the target audience, text is readable and legible, consistent punctuation and capitalisation etc.	
Explained relevant implications	Relevant implications are explained with reasons given. The implications explained must be relevant to the outcome they have produced, not generic.	

ASSESSMENT SCHEDULE

AS91893 USE ADVANCED TECHNIQUES TO DEVELOP A DIGITAL MEDIA OUTCOME

Programme 4: Tourism in your region
Credits: 4 (Internal)

Final grades will be determined on a holistic judgment of the evidence against the achievement criteria.

CRITERIA	JUDGMENT	EVIDENCE
Used information from testing to improve the outcome	Feedback has been gathered on layout, appropriate images, quality of images and readability. There is evidence that feedback was collected and that the outcome was improved or changed as a result of this testing or feedback.	
Applied relevant conventions to improve quality of the outcome	Relevant conventions have been applied. For example: Resolution is 150—300dpi with explanation of why the resolution was necessary. How they ensured it was the correct resolution.	
Addressed the relevant implications	Relevant conventions have been addressed. There is likely to be evidence in the process the student followed. If the outcome is well-designed, aesthetically pleasing, appropriate for the end-users described, readable, legible, images are at correct resolution, colour space is CMYK, legal and ethical procedures followed (copyright, intellectual property) etc, this criteria will have been met.	

ASSESSMENT SCHEDULE

Programme 4: Tourism in your region
Credits: 4 (Internal)

Final grades will be determined on a holistic judgment of the evidence against the achievement criteria.

CRITERIA	JUDGMENT	EVIDENCE
Iterative improvement throughout the design, development and testing process	Evidence of testing, proofing at key points of development (at least two tests completed). Changes made based on results of testing. At least one change made at each test. For example there are cycles of deliberate improvement which may include trialling better ways to create parts of the outcome. There should be a marked improvement in the quality of the outcome. For example the student trialled different formats for the cover-page and selected the most appropriate.	
Used efficient tools and techniques	Sensible naming of files and folders Use of templates or master pages File names are descriptive Images are the correct size and resolution, and not scaled or resized in the layout software Fonts are readable and legible Use a data merge Data source saved as CSV Paragraph styles created and applied	