

National Certificate of Educational Achievement

2011 Assessment Report

Technology Level 2

- 90360** Inform own technological practice through the characterisation of an existing production process
- 90361** Examine technological knowledge in biotechnology practice
- 90363** Examine technological knowledge in electronics and control technology practice
- 90365** Examine technological knowledge in food technology practice
- 90367** Examine technological knowledge in information and communication technology practice
- 90371** Examine technological knowledge in materials technology practice
- 90373** Examine technological knowledge in structures and mechanisms practice
- 90773** Examine how technological practice is influenced by responsibilities to the wider community

COMMENTARY (PUBLISHED REPORT ONLY)

Generally, candidates presented their work in a suitable manner. However, there were portfolios that had one or more of the following:

- the actual outcome
- mock ups
- lots of little tabs and folds that needed to be opened to read the information
- loose pages from broken bindings
- illegible handwriting
- use of inappropriately dark/coloured or decorated paper, making it difficult to read written evidence
- inappropriate coloured pens e.g. silver or gold, making it difficult to read written evidence

These portfolios are difficult and time-consuming to make accurate judgements on candidates' work.

The use of a written report(s) for providing candidate evidence for one or more of the standards has been a widely used form of presenting evidence in this year's marking process. This form of evidence was helpful for assessors in finding evidence quickly but this was not always supported by, specific excerpts as evidence from the candidate's portfolio of work to support the report. There were some candidates who presented detailed reports on research related to a specific case studied technologist(s) and/or a technological outcome(s), but did not meet the requirements of the standards as the evidence presented did not link knowledge gained to how this had informed or influenced their own practice.

Some reports appeared to be written as an additional task after the candidate had completed their own technological practice, thus disadvantaging the candidate in providing evidence to identify, explain, or discuss how this knowledge informed their own practice. These candidates were able only to compare what knowledge they had gained to what they did similarly or in contrast within their own completed practice. This did not allow candidates to meet the requirements of the standard.

Where the requirements had been correctly interpreted, the use of templates have made it simpler for candidates to address the evidence requirements of a specific standard. However, the structure of these templates did not always allow candidates to clearly demonstrate, within the template itself, the level of understanding required to meet the assessment criteria at Achievement with Excellence.

The assembly of evidence for these standards required a clear understanding of the achievement criteria and the accompanying explanatory notes for the current version of the standard, together with the relevant assessment specifications. A number of candidates are submitted well-presented, detailed work that did not meet the standard because specific aspects of the assessment criteria in version 2 of the standards had not been addressed. This is most specifically in relation to the second criteria found in all of the

standards related to candidates providing evidence to support the identification, explanation, or discussion of how the evidence presented to support the first criteria of these standard has been used, how it has informed and/or enhanced their own technological practice.

The work submitted by some candidates within school submissions showed a marked similarity. Where class research related to a technologist's practice or research from the internet is used, there was a tendency for candidates to have the same information. There was often little evidence of further processing of material by these candidates to demonstrate understanding which could then, in turn, be used to inform their own practice. Candidates must provide evidence which has been generated by them as individuals. Some candidates were able to use the generic/class provided information to show how this independently informed their practice.

Achievement Standard number (e.g. 90802)	90360
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ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- provided evidence that they had visited a company/factory and/or watched a video/examined case study resources or were visited by a technologist with relevance to a specific production process of an outcome
- characterised a production process from this evidence using a flow diagram/chart and/or a written description of each key stage and **then**
- identified how the characterisation of this production process showed them processes and/or practices to follow/use in developing their own outcome or
- identified parts within this characterisation that had informed their own practice.
- indicated how this knowledge informed their own practice with references to these evidenced throughout their own practice and/or in a final evaluation and/or in a separate report.

NOT ACHIEVED

Candidates who were awarded Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- had developed their own production process for their outcome but had not characterised an existing production process from outside their own practice
- described a visit to a factory in general terms such as the layout, labour and equipment required but did not characterise the production process within that environment in relation to relevant key stages, and the inputs and outputs required for each
- had evidence of an existing production process in the form of a flow diagram and/or written description but had not identified how it informed their own practice or
- had characterised a process that was **not** accepted as an existing technological production process of a technological outcome e.g. a recipe, pattern instructions or a set of “how to make” instructions.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- characterised a production process in the form of industry-recognised flow diagrams/charts, flow symbols and annotated notes, and industry-appropriate quality control strategies

- identified where and what quality controls are used
- showed why, where, and how they used quality controls in the development of their own outcome
- explained how this characterisation had informed their practice with references to these evidenced throughout their own practice and/or in a final evaluation and/or in a separate report.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- included more detail related to the characterisation of the production process including limitations imposed on the process (e.g. bottlenecks, critical control points related to time, temperature, or tolerances)
- discussed what influences the characterisation of the production process had on their own practice **and**
- discussed how this knowledge enhanced the quality of their own outcome with references to these evidenced throughout their own practice and/or in a final evaluation and/or in a separate report.

Achievement Standard number (e.g. 90802)	90361, 90363, 90365, 90367, 90371, 90373
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ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- examined a technologist(s) and their practice (from a visit, video or written case study e.g. Andrea Moore, Furnware) and/or
- examined an existing technological outcome developed by a technologist(s) e.g. garment by a fashion designer especially for WOW, website by a local graphic designer, furniture made by a local industry and/or
- examined existing product(s) sourced from shops/outlets, internet, and/or magazines e.g. fashion designers' outfits, skirts, dresses, baked goods, outdoor furniture, websites **and**
- identified key knowledge from this research by using a range of disassembly techniques such things as: target market, materials/ingredients and their properties; components; construction/joining techniques; design and/or technological principles e.g. aesthetics (e.g. colour, layout, appearance) and ergonomics; and/or technological practice required e.g. planning tools, stakeholder consultation, production processes, and roles required; and price range **then**
- linked the identified knowledge to their own work, e.g. "This website has used white as the background for easy reading, this is a good idea which I will use in making my website"; "Pine was used to make this table, I will

also use pine because ...”; “because Furnware used this method for making their chairs so I did my table like this because ...” **or**

- used templates to present identified knowledge used by technologists with an explanation of how that information was or would be used in their own practice **or**
- referred to the identified technological knowledge sourced at various stages throughout their practice and explain how this knowledge was used to help their own practice **or**
- considered a large range of existing products similar to what they were planning to make e.g a range of chilly bins, and identified key knowledge such as desirable key attributes and used this knowledge in designing and developing their own outcomes **or**
- used disassembly techniques to gain knowledge from existing outcomes and showed that that knowledge was used when developing their own outcomes **and**
- understood that the technological knowledge from outside practice should be linked their own practice in a way that shows how the knowledge has been used or not and why
- indicated how this knowledge informed their own practice by using references to this knowledge throughout their own practice and/or in a final evaluation and/or in a separate report.

NOT ACHIEVED

Candidates who were awarded Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- researched technological knowledge such as: materials /ingredients and their properties, components, joints and skills, construction techniques, tools, design principles, font types or use of colour, but did not source this knowledge from other’s practice or any existing outcomes other than their own outcome and practice
- did not describe how knowledge that had been correctly identified as being key and applied to the development of another technological outcome had meaningfully impacted on the development of their own outcome
- identified knowledge that was not key and applied in relation to existing products (these were mostly cut out pictures from magazines or sourced from the internet) with comments such as, “This is a cool colour”; “This looks expensive”; “ This is made from wood” or “The pleats are nice and flattering”
- researched existing products pointing out what they did not like and were not going to use in their own practice and what was not suitable for the environment they were dealing with
- presented existing product research like a case study and did not apply it to any part of their own process, made no reference to how it influenced their project

- identified knowledge from a case studied technologist which was not key and applied such as personal information e.g. how long they have worked at ..., qualifications they have, salary
- researched technologists pointing out what they did not have in common or what they did not like about the way they did their practice, and had no link to what they were influenced by with regard to their practice
- made a tenuous link that did not relate to the candidate's current or immediate practice e.g. "In the future I might want to become a fashion designer."; "In my next project I will consult with my stakeholder more regularly and use planning to help me finish my project on time"
- compared and contrasted what a technologist did in their practice with what the candidate did in theirs (similar and different practices) without showing how the knowledge related to what the technologist did had informed the decision making within the candidate's own technological practice eg "I spray painted my cabinet whereas the technologist used clear varnish"
- used provided templates with the appropriate headings but did not fill them out appropriately
- did not implicate how own practice was informed by key knowledge.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- examined an existing technological outcome and or technologist's practice, described fully, with details and comment, how it will inform their own practice and explained throughout their own practice / final evaluation and / or in report format how this knowledge was used and how it affected their own final outcome with clear links between this knowledge and their own outcome
- understood that the technological knowledge from outside practice should be explained in detail and then used to make a difference to their own practice in ways that can be explained with "because"; "therefore I ..."; "This is important so I am going to ..." ; "I will also need to ..."
- used disassembly techniques on similar existing product(s) to their own intended outcome to describe in detail such things as; key physical and functional attributes, materials, components, construction techniques, packaging and labelling and consideration of tools or codes of practice required to make these products with clear links between this knowledge gained and their own practice / outcome
- compared and contrasted two or more outcomes or the practice of two or more technologists in detail with links to how this knowledge will inform own practice but did not explain the influence of this knowledge on the quality of their own practice or outcome in any detail.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- investigated a minimum of two existing technological outcomes and/or technologists' practice
- explained in detail key knowledge that was used during the development of the existing technological outcomes and/or throughout the technologists' practice.
- compared the knowledge underpinning the existing technological outcomes and/or technologists' practice and selected aspects that were useful in the development of their own outcome.
- constantly referred back to existing technological outcomes and/or technologists' practice during the development of their own outcome and justified their reasons with regard to their technologist's influences.
- discussed relevance of knowledge to own outcome and why it was used or rejected.
- reflected and explained throughout their own practice how and where the acquired knowledge was used to inform their own practice.
- compared their final outcome against the existing technological outcomes and/or technologists' practice discussing how it had influenced the quality of their outcome.
- understood that the technological knowledge from outside practice should be examined closely and then used to make a difference to enhance the quality of own practice in real terms, not just as an overall statement of better quality
- showed in their whole practice that the knowledge from the technologists or other outcomes were continually considered and a decision made on whether to use it and why and what difference it made to their practice or outcome
- used tables and compared the knowledge of the technologists and then indicated that they utilised the appropriate knowledge to influence their work. They explained in depth good linkages and reasons for doing so and compared the quality of their outcomes.

OTHER COMMENTS

Some candidates who met the criteria for Achievement with Merit did not meet the criteria for Achievement for Excellence because they had not provided evidence of any discussion on how the quality of their own outcome had been enhanced by this knowledge and/or did not have sufficient evidence of a final and completed outcome.

Achievement Standard number (e.g. 90802)	90773
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ACHIEVEMENT

Candidates who were awarded Achievement for this standard demonstrated the required skills and knowledge. They commonly:

- provided evidence (e.g. annotations / photographs / teacher handouts) within an identified setting such as: from a classroom visit by a practicing technologist and/or a visit to a business / factory and / or a written case study of technological practice and / or watched a video **then**
- identified one or more of the operating practices used from this evidence and identified technologist's responsibilities which affect and / or must be considered within this operating practice(s) **or**
- identified from a technologist's practice issues which concern or affect the wider community when designing, manufacturing or using products **or**
- identified a technological outcome (e.g. a website) and identified responsibilities (e.g. Privacy Act, Copyright Act, Health and Safety Act) that should be considered in relation to the production of that outcome **and**
- indicated how this knowledge informed their own practice by using references to this knowledge throughout their own practice and / or in a final evaluation and / or in a separate report.

NOT ACHIEVED

Candidates who were awarded Not Achieved for this standard lacked some or all of the skills and knowledge required for the award of Achievement. They commonly:

- did not identify operating practice(s) influenced by technologists' responsibilities outside of their own practice
- identified operating practices, but did not show evidence of how they were influenced by responsibilities to the community
- identified / explained responsibilities (e.g. Copyright Act, Privacy Act, Health and Safety Act) but did not relate these to an operating practice within a technological setting e.g. responsibilities related to the development of a website
- identified relevant knowledge but did not link that knowledge to explain how it informed their own practice
- compared a technologist's practice with their own (similarities and differences of what each does) with no link / explanation as to how the technologist's practice will or has informed the candidate's own practice.

ACHIEVEMENT WITH MERIT

In addition to the skills and knowledge required for the award of Achievement, candidates who were awarded Achievement with Merit commonly:

- explained how selected operating practices within an identified setting, e.g. the school canteen, the fashion industry, furniture making factory, website development, are linked to the technologist's responsibilities to the wider community
- explored these links in terms of a particular technologist or community of practice which had a direct relationship to their own development work (e.g. soft materials candidates explored the fashion industry as a community of practice or a particular technologist or a factory making garments within the fashion industry)
- described operating practices in detail before starting their practice with references to these evidenced throughout their own practice related to their own decision-making and/or
- explained how this knowledge had informed the way they developed their own outcome within a final evaluation and/or separate report.

ACHIEVEMENT WITH EXCELLENCE

In addition to the skills and knowledge required for the award of Achievement with Merit, candidates who were awarded Achievement with Excellence commonly:

- discussed interactions between technologists' responsibilities to the wider community and related operating practices
- discussed how the quality of their own outcome was influenced by these operating practices or
- clearly indicated how the interactions that they discussed had impacted and influenced the quality of their own final outcome(s) with references to these evidenced throughout their own practice and/or in a final evaluation and/or in a separate report.

OTHER COMMENTS

There were a number of candidates whose submissions had attempted to identify technologists' responsibilities but did not identify operating practices which may be affected or influenced by these responsibilities or vice versa. Some candidates who met the criteria for Achievement with Merit did not meet the criteria for Achievement for Excellence because they had not provided evidence of any discussion on how the quality of their own outcome had been enhanced by this knowledge including evidence related to their practice and final completed outcome.