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| Chat query  | Respsonse |
| Technology Glossary query  | The current glossary can be found at [Materials and Processing Technology | NCEA (education.govt.nz)](https://ncea.education.govt.nz/technology/materials-and-processing-technology?view=subject-glossary&refinementList%5Bcurriculum%5D%5B0%5D=NZC&refinementList%5Bsubject%5D%5B0%5D=Materials%20and%20Processing%20Technology&refinementList%5Bsubject%5D%5B1%5D=Common&refinementList%5Btype%5D%5B0%5D=Subject%20Specific) but doesn't yet have properties listed |
| Transform:  | malleability, What about things like raising agents? Gluten? Binding and setting? |
| Properties: | flammable, soluble |
| I see innovation is not written in the standard any more, last year 92013 was only standard that had the word innovative.  | Not explicitly in the standard, but is there in the unpacking:<https://ncea.education.govt.nz/technology/materials-and-processing-technology/1/2?view=unpacking> **The intent of the Standard**This Achievement Standard assesses the ability of ākonga to experiment with different materials by exploring their properties in the development and creation of a purposeful outcome.Ākonga are encouraged to be innovative in their experimentation with materials. This experimentation should be the inspiration for what they do with the materials. |
| Does the standard require the use of an unconventional material? | Experiment with different materials to develop a Materials and Processing Technology outcome[Experiment with different materials to develop a Materials and Processing Technology outcome | NCEA (education.govt.nz)](https://ncea.education.govt.nz/technology/materials-and-processing-technology/1/2?view=unpacking)Ākonga will query processes as they explore materials’ properties. Starting questions could include:* What can traditional or contemporary materials do?
* How can they be experimented with — what is the result?
* How can this knowledge be used in the development and creation of a purposeful outcome?

The term ‘unconventional’ has not been used. ‘Different’ can be interpreted in many ways. What is accessible in your school context?  |
| Will there be any external moderation of the results from this standard? Assuming that would be if high value, but also a huge cost to have it done. | Do you mean NZQA moderation? This will happen as part of the usual moderation process. |
| Exploring materials without giving them an end purpose at the start could be very wasteful.  I don't have an unlimited budget or unlimited time. | <https://ncea.education.govt.nz/technology/materials-and-processing-technology/1/2?view=standard>Purpose Students are able to experiment with different materials to develop a Materials and Processing Technology outcome. |
| Transforming  | steaming wood, |
| steaming wood, would steaming be manipulating? | Is the structure/composition of the material staying the same? – if so – it could fall under manipulation as well.  |
| Is cooking a product, ie a cake batter into a cupcake, considered transforming? This would alter structure of eggs, flour etc | Transforming: Working with existing materials in ways that change their structure to maximise product performance |
| Combining  | Resin and wood, rebar in concrete for strength, embroidery?  |
| So combining not gluing? | Gluing is a joining technique.  |
| Manipulating | Manipulating in food can also be scooping batter, filling a cake tin, cutting, separating egg yolk and white... |
| I wonder if the introduction of different flours could work GF flour, Rice, Potato, Coconut flour | That would be combining. Applying heat would change structure of materials, and therefore transforming the material - ie eggs would go from a liquid to solid |
| Great book flashed up on screen | Technology Education in New Zealand, A guide for teachers Routledge ISBN 978-0367-41897-7 |
| for this standard can you achieve with only one technique? | In Materials and Processing Technology, *experimentation*refers to trying out ideas or methods for the purpose of discovery.Identify how the exploration/experiments informed their understanding of the properties of materials. For example, what was discovered about material properties as a result of:○ transforming, and/or○ combining, and/or○ manipulating, and/or○ forming, and/or○ a combination of all four techniques and processes.  A student could produce an outcome that focuses on one of the above, however through their learning they will most likely have learned about and experienced most of them. |
| How will students know if it will maximise product performance if they are not supposed to know what the product is at the start?  | "A purposeful context may arise as a result of the process of materials experimentation and/or it may be identified as part of a given brief." Brief development or given brief will guide what product they intend to make, therefore they should be able to experiment to maximise that product performance. |
| Is adding hand embroidery to a fabric, manipulating a fabric? | It could be considered manipulating with sufficient justification – inclined to think it is linked more to combining.  |
| The potato example is of transformation not manipulation? | I think this is a good example where it could be considered either dependent on the approach and justification.  |
| Layering up fabric, wadding, fabric and then stitching over the whole to make a quilted fabric, is that manipulating or forming? | Quilting forms a new fabric that has a different physical structure to the separated contributing layers. However, by quilting the materials are being manipulated to maximise each layers contribution to the performance of a quilt and what the intention of quilting fabric is.  |
| I was mistaken last week when we briefly discussed this...I thought it was mentioned that a feasible outcome was required not necessarily a physical outcome...?  | Both the internals need physical outcomes.  The ExternalAchievement Standard 1.4 (92015): Demonstrate understanding of techniques selected for a feasible Materials and Processing |
| Is group work appropriate? We are making small savoury pies for a big morning tea (100 people). Can akonga develop the recipe together? Can they make the outcome together...difficult to make small quantities en mass. | Group work to learn about the properties of materials is great. However, students need to evidence what they have learned and its application, individually.  |
| Can a person do 20 A4 pages | [ttps://ncea.education.govt.nz/technology/materials-and-processing-technology/1/2?view=conditions](https://ncea.education.govt.nz/technology/materials-and-processing-technology/1/2?view=conditions)For 1.2 [Experiment with different materials to develop a Materials and Processing Technology outcome | NCEA (education.govt.nz)](https://ncea.education.govt.nz/technology/materials-and-processing-technology/1/2?view=conditions)Examples of student submissions could include one of the following methods of presentation:* a digital slide presentation (no more than 20 slides at size 12 font or bigger)
* a collection of scanned paper evidence (no more than 10 A3 sides of paper)
* a video or recorded oral presentation (3-4 minutes long)
* a combination of the above, totalling no more than the equivalent of 750-800 words.

Students should not be limited to these and decisions about format should be made in negotiation with the assessor. |
| Will we be doing webinars like this for 92014 and 92105 ? | Great question – I’ll see what I can do 😊  |
| Do you think it would be possible to create some exemplars that only use 750-800 words? | ZQA is responsible for exemplars - due to a small number of pilot schools there may not have been suitable exemplars available. Hopefully as more work is submitted more examplars are made available.  |
| Can they be given a template to use as a guide? Like a slides with headings to prompt them. | Templates can be useful, however take care not to over template. A question for an NZQA workshop – what is over templating and what does it look like?  |
| can the student use lots of annotated photos of project as evidence as opposed to lots of writing. | The learning should be evidenced in the best way for that student – see examples above.  |
| Are there any examples for electronics/robotics? or do I need to use Digital Technologies? | MPT has been developed to be accessible to electronics and robotics. Exemplars will be developed by NZQA as work from these contexts submitted for external moderation.  |
| When is the final date for internal submissions? | [Materials and Processing Technology (Level 1 only) :: NZQA](https://www2.nzqa.govt.nz/ncea/subjects/select-subject/materials-and-processing-technology/#e19067_heading1) |
| Screencastify link  | <https://www.screencastify.com/> |
| What is the equivalent for Microsoft? | You can insert media and just insert some audio...OR dig a little deeper and find the recording tab (it might not be turned out automatically) and then you can record the whole slide show.  |
| Can you please let us know how to send this as moderation? Is there a file size limit for sending this? | Talk to your Principals nominee - or the information can be found at [Principal's Nominee handbook - 2024 (nzqa.govt.nz)](https://www2.nzqa.govt.nz/assets/NCEA/NCEA-for-teachers-and-schools/Principals-nominees/PN-Handbook-2024-v2.pdf) |
| I would like a guide on how to teach students how to gather stakeholder feedback. | 1. Student reflection.
2. Ask appropriate (the right person for that point in development – this will continually change. They will consult with the end user the most during development) stakeholders for feedback – teach students how to ask questions to get useful answers.
3. What have I learned from the feedback?
4. How will this inform my practice?
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