

Internal Assessment Resource

Education for Sustainability Level 2

This resource supports assessment against Achievement Standard 91734

Standard title: Develop a collaborative response that promotes a sustainable future, in relation to a current issue

**Credits:** 4

Resource title: Towards Zero Waste

**Resource reference:** Education for Sustainability 2.5B

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| This resource:* Clarifies the requirements of the standard
* Supports good assessment practice
* Should be subjected to the school’s usual assessment quality assurance process
* Should be modified to make the context relevant to students in their school environment and ensure that submitted evidence is authentic
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| Date version published by Ministry of Education | February 2015 To support internal assessment from 2015 |
| Authenticity of evidence | Teachers must manage authenticity for any assessment from a public source, because students may have access to the assessment schedule or student exemplar material.Using this assessment resource without modification may mean that students’ work is not authentic. The teacher may need to change figures, measurements or data sources or set a different context or topic to be investigated or a different text to read or perform. |

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Teacher guidelines

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

Teachers 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 students against it.

Context/setting

This activity requires students to work collaboratively to comprehensively develop a response that promotes a sustainable future, in relation to the current issue of waste management in the school.

Conditions

It is suggested that the assessment activity take place over 8-10 weeks of in- and out-of-class time.

Throughout the process, observe how well the students participate and contribute within their group and maintain a brief record of your observations.

Resource requirements

Students should have access to:

* Internet, for research and communication
* Technology and equipment, as and where appropriate
* Information on systems thinking and future thinking
* Useful websites containing relevant information related to waste minimisation

Additional information

This assessment activity is based on the assumption that students have an in-depth understanding of: the principles and aspects of sustainability; sustainable futures; research methods and data analysis; evaluation; and wherever possible Māori concepts and values relating to the environment.

It may be advisable to speak to members of the groups your students are to interact with in advance, so that they are fully aware of what is involved and happy to participate. Ensure that the same person or persons is not being inundated by several groups unless they are happy to do this.

The activity used to assess against this standard, with the choice of a suitable context, could be used in conjunction with assessment activities for EfS 2.1 (AS90810) and 2.2 (AS90811).

Other possible contexts

Although this resource is focused on waste in the school, you may adapt it to other contexts more relevant to your situation and your students’ interests. If you change the context for the activity, you need to provide equivalent relevant resources.

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Student instructions

Introduction

This assessment activity requires you to develop a collaborative response to current waste production and management issues in your school.

You are going to be assessed on how comprehensively you develop a response that promotes a sustainable future.

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

Teacher note: You will need to read these student instructions and modify them if necessary to meet the needs and interests of your students.

Task

Work with your group, and at least one other stakeholder, to develop a response to the issue of waste reduction or elimination in your school.

Responses could include but are not restricted to: a strategic plan for future change, a design for a solution, a planning document or presentation, a rationale for proposed action, a policy and/or action plan, or an artistic interpretation that shares the issue with others. Negotiate this with your teacher to make sure that the evidence you submit will be sufficient to allow you to succeed in this standard.

Stakeholders may include Board of Trustees, senior management, caretaking staff, other staff and/or other students.

Keep a logbook throughout the process to record evidence of your interactions with the community group, your data collection and measurement methods, your reflections and conclusions. The information may be categorised and come from direct observations, tables, graphs, resource sheets, photographs, videos, interviews, attitude/behaviour survey, websites, and/or reference texts.

You will work in groups of 3-4 but you will be assessed individually. Include evidence of your individual contributions in your logbook.

Throughout this assessment activity, your teacher will observe how well you participate and contribute to the development of a response.

You have 8 weeks to complete this task.

Identify the current situation

* Research the current issue of waste management in the school, in relation to aspects of sustainability.
* Identify the stakeholder(s) you wish to work with.
* Collect data related to:
* the practices occurring locally that contribute to the issue of waste reduction or elimination in the school
* the values and perspectives the people in your group and the stakeholder(s) have regarding waste management
* what the stakeholder(s) would like to do to manage waste for a more sustainable future.

This may include carrying out a waste audit, interviewing students and staff.

Develop your response

Work with your group to develop a response to the issue of waste reduction or elimination in your school. This will involve:

* Interacting with stakeholder(s) and analysing their perspectives.
* Selecting a response based on ideas from your group and the stakeholder(s).
* Using the data and evidence you collected about the current situation to support your choices.
* Demonstrating systems and future thinking. Consider how your action relates to the wider school community and/or location and beyond, both now and in the future.
* Co-operating within your group and determining each other’s skills and perspectives.

Finalise your response

Organise your information and finalise your response. Make sure that it promotes a sustainable future in relation to waste reduction or elimination in your school.

Reflect and make conclusions

In your logbook:

* Explain the issue of waste reduction or elimination and outline how it relates to at least two aspects of sustainability.
* Draw informed conclusions about the effectiveness of the processes used to generate the response, taking account of the different values and perspectives of the members of both your group and the community group.
* Use a SWOT analysis to evaluate the strengths, weaknesses, opportunities and threats associated with the response.
* Draw justified conclusions about the effectiveness of the response, and how it promotes a sustainable future. This will include explaining how you determined its effectiveness, discussing wider implications and making recommendations for future response development.

Submit for assessment

Submit your completed response and logbook for assessment.

Resources

Useful websites that contain relevant information related to waste include:

Local District Council websites, for example [www.waikatoregion.govt.nz/Environment/](http://www.waikatoregion.govt.nz/Environment/). This website has a range of resources and reference material for teachers and students related specifically to waste.

<http://www.wasteminz.org.nz/>

[www.mfe.govt.nz/publications/waste/waste-strategy](http://www.mfe.govt.nz/publications/waste/waste-strategy)

[www.zerowaste.co.nz](http://www.zerowaste.co.nz).

Assessment schedule: Education for Sustainability 91734 - Towards Zero Waste

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| Evidence/Judgements for Achievement  | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| Develop a collaborative response that promotes a sustainable future, in relation to a current issue. The student has:* Developed a response that promotes a sustainable future, in relation to the issue of waste reduction or elimination in their school. To do this they have:
* Worked co-operatively within their group
* Interacted with a community group
* Collected data and provided evidence of their measurement methods

Evidence of collaboration (co-operation, and interaction within the group and with stakeholders) is recorded in the student’s logbook, as is evidence of their individual contributions to the group, data collection and measurement methods. The teacher has also recorded evidence of the student’s individual contributions. For example: *“As a group we took our results to our class, and to the leadership teams in the school (staff and students). We worked with these teams for a while and then formed a smaller group that was interested in working with us to get something done to improve our waste management practices. Several of us had been to other schools and now we had done our audit, we knew there were things we could do to make things better here.”** Explained how waste management is an issue in the school, in relation to at least two aspects of sustainability.
* Demonstrated systems and future thinking

In the logbook: *“Waste management is a global issue that has implications for all of us. Every year, millions of tonnes of waste is put into landfills. Environmentally, this is not a sustainable solution for dealing with waste, because ….. Another aspect of sustainability is the economic one. There are things we could do with our waste that are creative, that means the country doesn’t spend huge money on getting rid of it. The way we deal with it now is an issue, but some people are starting to see some waste as a resource we would make money from. For example…”* *At the moment our school only recycles paper and cardboard. In every classroom there is a paper recycling bin and an ordinary rubbish bin. These get emptied regularly and the paper goes into a container that then gets measured. We are in the Paper for Trees programme and get more trees if we recycle more paper (volumes from own data cited). The caretakers deal with all the recycling and the rubbish. Everything that isn’t paper or cardboard goes out into the general rubbish and ends up at landfill. There was (refer to data) tonnes sent to landfill last year. The caretakers are very good at keeping things that might be useful though, and have a shed full of things that might be useful or could have a new use.”**”We did a waste audit to gather our data, and these are some of our other findings….”**We came up with the idea that the school needed a plan. So that was our first response to the issue: to develop a plan that the school could work through to improve things regarding waste. We also thought that most students are online a lot and to get any messages to them we could post a video about what good waste practices are. We found that although all classrooms had recycling bins students weren’t usually using them and they became full of other things like lunch wrappers. We thought that the school wouldn’t need to deal with so much waste, and waste time sorting it if there wasn’t as much produced and students used the recycling bins provided, so the focus of the video was to teach students in a fun way how to do the right thing.”*The response has been submitted.* Drawn conclusions about the processes used to generate the response, taking account of the different values and perspectives of the members of both their group and the stakeholders.

In the logbook: “We were pleased with the way our group worked together. The ideas we had as a group were better than if just one of us had to come up with them. For example…. Throughout the process we worked well together and shared our ideas. Our teacher worked with us too, checking that we were all involved. Working with the leadership teams was also good, as it gave us an idea of what sort of things might work in the school. This gave us ideas for what we could do. The plan we had involved getting some publicity going and motivation for students to do the right thing, like putting their rubbish in the bin and using the recycling bins. We thought that maybe they didn’t know why that was an issue. Working with other people helped us see that it was important to let people know why we wanted them to do things before they would. We thought this was a sort of combination between cultural sustainability and environmental sustainability because we had to shift the culture of the way people do things at school, and how they think about the school, for the benefit of the environment. The environment won’t only look better but it saves money with caretakers not having to waste time and we can all pull together as a team.”* Drawn conclusions about how to determine the effectiveness of the response in terms of promoting a sustainable future.

In the logbook: “We have critiqued our response to see how effective they have been, or will be. We determined that they were effective, and are pleased that we have made a difference already. The follow up waste audit we did at the end showed that already some of our plan has been put into action and is making a difference about the amount of waste, and how it is being disposed of at school, mostly by students making different choices. We will do another follow up audit and set of interviews later in the year to see if everything is still going according to our plan.” In addition to the response, the student has submitted a log containing evidence of their individual contributions, data collection and measurement methods, their interactions with the community group, and their reflections and conclusions.*The examples above are indicative samples only.* | Develop, in depth, a collaborative response that promotes a sustainable future, in relation to a current issue. The student has:* Developed a response that promotes a sustainable future, in relation to the issue of waste reduction or elimination in their school. To do this they have:
* Worked co-operatively within their group
* Interacted with a community group
* Collected data and provided evidence of their measurement methods

Evidence of collaboration (co-operation, and interaction within the group and with stakeholders) is recorded in the student’s logbook, as is evidence of their individual contributions to the group, data collection and measurement methods. The teacher has also recorded evidence of the student’s individual contributions. For example: *“As a group we took our results to our class, and to the leadership teams in the school (staff and students). We worked with these teams for a while and then formed a smaller group that was interested in working with us to get something done to improve our waste management practices. Several of us had been to other schools and now we had done our audit, we knew there were things we could do to make things better here.”** Explained how waste management is an issue in the school, in relation to at least two aspects of sustainability.
* Demonstrated systems and future thinking

In the logbook: *“Waste management is a global issue that has implications for all of us. Every year, millions of tonnes of waste is put into landfills. Environmentally, this is not a sustainable solution for dealing with waste, because ….. Another aspect of sustainability is the economic one. There are things we could do with our waste that are creative, that means the country doesn’t spend huge money on getting rid of it. The way we deal with it now is an issue, but some people are starting to see some waste as a resource we would make money from. For example…”* *At the moment our school only recycles paper and cardboard. In every classroom there is a paper recycling bin and an ordinary rubbish bin. These get emptied regularly and the paper goes into a container that then gets measured. We are in the Paper for Trees programme and get more trees if we recycle more paper (volumes from own data cited). The caretakers deal with all the recycling and the rubbish. Everything that isn’t paper or cardboard goes out into the general rubbish and ends up at landfill. There was (refer to data) tonnes sent to landfill last year. The caretakers are very good at keeping things that might be useful though, and have a shed full of things that might be useful or could have a new use.”**”We did a waste audit to gather our data, and these are some of our other findings….”**We came up with the idea that the school needed a plan. So that was our first response to the issue: to develop a plan that the school could work through to improve things regarding waste. We also thought that most students are online a lot and to get any messages to them we could post a video about what good waste practices are. We found that although all classrooms had recycling bins students weren’t usually using them and they became full of other things like lunch wrappers. We thought that the school wouldn’t need to deal with so much waste, and waste time sorting it if there wasn’t as much produced and students used the recycling bins provided, so the focus of the video was to teach students in a fun way how to do the right thing.”*The response has been submitted.* Drawn informed conclusions about the effectiveness of the processes used to generate the response, taking account of the different values and perspectives of the members of both their group and the stakeholders.

In the logbook: “We were pleased with the way our group worked together. The ideas we had as a group were better than if just one of us had to come up with them. For example…. Throughout the process we worked well together and shared our ideas. Our teacher worked with us too, checking that we were all involved. Working with the leadership teams was also good, as it gave us an idea of what sort of things might work in the school. This gave us ideas for what we could do. The plan we had involved getting some publicity going and motivation for students to do the right thing, like putting their rubbish in the bin and using the recycling bins. We thought that maybe they didn’t know why that was an issue. Working with other people helped us see that it was important to let people know why we wanted them to do things before they would. The process was a good one because we used the data we had collected at the beginning to inform what we thought were the best ideas. So when we debated, we could go back to our information and use it to make decisions about which ideas and actions would be best. We thought this was a sort of combination between cultural sustainability and environmental sustainability because we had to shift the culture of the way people do things at school, and how they think about the school, for the benefit of the environment. The environment won’t only look better but it saves money with caretakers not having to waste time and we can all pull together as a team.”* Drawn conclusions about the effectiveness of the response in terms of promoting a sustainable future, including how they determined the effectiveness.

In the logbook: “We have critiqued our response to see how effective they have been, or will be. We determined that they were effective, and are pleased because we have made a difference already. The follow up waste audit we did at the end showed that already some of our plan has been put into action and is making a difference about the amount of waste, and how it is being disposed of at school, mostly by students making different choices. We will do another follow up audit and set of interviews later in the year to see if everything is still going according to our plan. If this continues, it will contribute to a more sustainable future in terms of economics for the school, and the school culture related to how we generate and deal with our waste, wider environmental picture by….”* Making recommendations for further development.

“We thought about setting up a Facebook page for the school about this, linked to other pages related to waste, as well as to Youtube etc. We could also make a blog or put our video directly onto Youtube. Basically, we want to get the messages further out there so that there will be a more sustainable future, because if everyone did their little bit, firstly by becoming aware of their actions and how the world hasn’t got room for all our rubbish, and then taking small positive actions, we might be able to influence the rest of society to make some changes too.”In addition to the response, the student has submitted a log containing evidence of their individual contributions, data collection and measurement methods, their interactions with the community group, and their reflections and conclusions.*The examples above are indicative samples only.* | Comprehensively develop a collaborative response that promotes a sustainable future, in relation to a current issue. The student has:* Developed a response that promotes a sustainable future, in relation to the issue of waste reduction or elimination in their school. To do this they have:
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* Demonstrated systems and future thinking

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In the logbook: “We were pleased with the way our group worked together. The ideas we had as a group were better than if just one of us had to come up with them. For example…. Throughout the process we worked well together and shared our ideas. Our teacher worked with us too, checking that we were all involved. Working with the leadership teams was also good, as it gave us an idea of what sort of things might work in the school. This gave us ideas for what we could do. The plan we had involved getting some publicity going and motivation for students to do the right thing, like putting their rubbish in the bin and using the recycling bins. We thought that maybe they didn’t know why that was an issue. Working with other people helped us see that it was important to let people know why we wanted them to do things before they would. The process was a good one because we used the data we had collected at the beginning to inform what we thought were the best ideas. So when we debated, we could go back to our information and use it to make decisions about which ideas and actions would be best. We thought this was a sort of combination between cultural sustainability and environmental sustainability because we had to shift the culture of the way people do things at school, and how they think about the school, for the benefit of the environment. The environment won’t only look better but it saves money with caretakers not having to waste time and we can all pull together as a team.”* Used a SWOT analysis to evaluate the strengths, weaknesses, opportunities and threats associated with the response.

In the logbook: *“We evaluated the response by looking firstly at the strengths of each response. We think the plan was the best response, as it had the backing of everyone to put it into action. The video wouldn’t appeal to the adults in the school, so although it was strong in terms of its effectiveness with students (actually better than the plan), as our brief conversations with people told us, it wasn’t as effective in changing adults attitudes. The main opportunity that arose through creating this response was that because we were working with adults as well as students, the communication we set up will be able to be used for other things. We think the adults value students opinions a bit more. This is an opportunity and also a strength of the way we went about it all. The main weakness of our plan was that we had too many ideas at once, so we had to end up re-planning so that the school could take it step by step towards becoming more sustainable with waste. It will also take a long time and quite a bit of effort to change people’s behaviour. We found that some of the people we spoke to just didn’t see why they should bother, so it was a hard start.”** Drawn justified conclusions about the effectiveness of the response, and how it promotes a sustainable future, which includes explaining how they determined the effectiveness, discussing wider implications and making recommendations for future response development.

In the logbook: “We have critiqued our response to see how effective they have been, or will be. We determined that they were effective, and are pleased because we have made a difference already. The follow up waste audit we did at the end showed that already some of our plan has been put into action and is making a difference about the amount of waste, and how it is being disposed of at school, mostly by students making different choices. We will do another follow up audit and set of interviews later in the year to see if everything is still going according to our plan. If this continues, it will contribute to a more sustainable future in terms of economics for the school, and the school culture related to how we generate and deal with our waste, wider environmental picture by reducing methane emissions from landfills.We thought about setting up a Facebook page for the school about this, linked to other pages related to waste, as well as to Youtube etc. We could also make a blog or put our video directly onto Youtube. Basically, we want to get the messages further out there so that there will be a more sustainable future, because if everyone did their little bit, firstly by becoming aware of their actions and how the world hasn’t got room for all our rubbish, and then taking small positive actions, we might be able to influence the rest of society to make some changes too.”In addition to the response, the student has submitted a log containing evidence of their individual contributions, data collection and measurement methods, their interactions with the community group, and their reflections and conclusions.*The examples above are indicative samples only.* |

Final grades will be decided using professional judgement based on a holistic examination of the evidence provided against the criteria in the Achievement Standard.