

Internal Assessment Resource

Education for Sustainability Level 2

This resource supports assessment against Achievement Standard 90813 version 2

Standard title: Demonstrate understanding of how different personal values have implications for a sustainable future

**Credits:** 3

Resource title: A light bulb moment

**Resource reference:** Education for Sustainability 2.3A v3

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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 Version 3To 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 assessment activity requires students to identify their own and other people’s values and associated behaviours related to energy use in their school and demonstrate comprehensive understanding of how these have implications for a sustainable future.

They will explain their findings and conclusions in an individual presentation to school staff in a format that they choose.

Conditions

It is suggested that the assessment activity take place over 3-6 weeks of in- and out-of-class time.

Make sure you have evidence of students’ assessments to be used for moderation. This may mean recording certain formats chosen by students to present their findings, e.g. speech or debate, formal presentation, lecture, or song.

Resource requirements

Students should have access to:

* Internet, for research and communication
* Technology and equipment, as and where appropriate
* Useful websites containing relevant information related to energy use and values

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.

Other possible contexts

Although this resource is focused on values and behaviours associated with energy use, you may adapt it to other relevant contexts for your students such as water conservation; stormwater; waste; transport; kaimoana; or food production. 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 make a presentation to your school staff about how different personal values associated with energy use in your school have implications for a sustainable future.

You are going to be assessed on how comprehensively you demonstrate your understanding of how different personal values associated with energy use in your school have implications for 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

Reflect on your own personal values and associated behaviours about energy use in your school, and also those of other people at your school, and how these have implications for a sustainable future.

Present your findings to selected school staff in a format of your own choice. Options include, but are not restricted to: visual display or model; data show/PowerPoint; speech or debate; formal presentation or lecture; song or artwork.

You may work individually or in a group, but you will be assessed individually. Include evidence of your individual contributions in your logbook if working in a group.

You have 4 weeks to complete this task.

Gather information

Research people’s values and associated behaviours related to the issue of sustainable energy use in your school. You may use a survey format to gather some of your information. Your research questions may include:

* Do people understand the issues associated with energy use?
* What types of values do people hold about aspects of sustainability?
* What are some historical and/or cultural viewpoints about sustainability?
* Do people share the same values around energy use as their friends or family?
* What are some of the behaviours regarding energy use?
* How do people’s values about energy use influence how they behave?
* What influences people’s values and behaviours?
* How does the issue of energy use influence a sustainable future?

Your research will include exploring your own, and other people’s values related to energy use at your school.Other people may include another group of students; teachers; BoT; caretaker; community members.

Finalise your presentation

Organise your findings and presentation in the selected format. Include:

* An examination of the characteristics of different personal values and the behaviours associated with them, to do with energy use.
* Informed conclusions about why certain values and associated behaviours regarding energy use have implications for a sustainable future.
* Justified conclusions about how or why some personal values and associated behaviours regarding energy use are more likely to lead to a sustainable future. This might include a discussion of future impacts and how and why values might be adapted to support a more sustainable future.

Use examples and evidence to support your conclusions.

Present your findings and submit for assessment

* Present your findings to your chosen audience in the selected format.
* Submit your logbook if you were part of a group.

Resources

Useful websites that contain relevant information related to energy use and values include:

<http://www.physics.otago.ac.nz/eman/hew/ehome/energyuse.html>

<http://www.energywise.govt.nz>

<http://www.eeca.govt.nz>

<http://www.mfe.govt.nz/issues/energy/>

<http://www.schoolgen.co.nz>.

Assessment schedule: Education for Sustainability 90813 – A light bulb moment

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| Evidence/Judgements for Achievement  | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| Demonstrate understanding of how different personal values have implications for a sustainable future.The student has:* Used examples to examine the characteristics of different personal values related to energy use in their school (their own and others’) and behaviours associated with them.

*“42% of students in our survey said they switch off lights when they leave a room, compared with 93% of adults in the school who we surveyed. When asked why do you turn off the light when you leave the room? 72% of people who do said it was to save power, 13% said it was because it was just habit. 15% said it was because it was a rule in their house. All of the adults I surveyed said they understood the importance of saving energy, but that they didn’t all go out of their way to conserve power. (Examples of personal values discussed.) It is just myself and Mum and Dad at home, we need to reduce our power bill to save money. We remind each other if we forget to turn the TV off at the wall each night and turn the lights off when we leave a room. I suppose my values about energy use are that I am doing what my parents expect, and also know that it is good in the wider picture too. I don’t waste power, but this is mainly because it is a habit now, not because I really think about it. Other people said the same.”** Drawn conclusions about the implications of certain personal values related to energy use in their school (their own and others’) and associated behaviours for a sustainable future.

*“We know in New Zealand we need to conserve power. There is only so much we generate through renewable resources – water, wind, solar, thermal, and the rest is still coal, gas or oil generated. Although we know this, we still waste a lot of power in our school. It is school policy during Terms 2 and 3 to run the boiler system every day throughout all rooms, which uses a lot of coal. Many people that we surveyed said they don’t make a point of closing classrooms doors during this time, which shows that they don’t value making the most of the heat provided, and in turn reducing the amount of coal used. People have different values and behaviours towards energy use. Saving money motivates some to be sustainable about energy use; others want to look after our environment. People who value the environment are more likely to save power, and conserve energy, not wasting it, because they know that if we use too much energy in the school, this in turn means that the country needs to fire up the fossil fuel burning power plants. This has negative effects on our atmosphere and is unsustainable in the long run. Some people don’t think about the future, as they value the things that use power more, and behave as if there is plenty and there always will be. The people who save power are contributing more to a sustainable future.”*In addition to presenting their findings, the student has submitted a logbook containing evidence of their individual contributions, if they were part of a group.*The examples above are indicative samples only.* | Demonstrate in-depth understanding of how personal values have implications for a sustainable future.The student has:* Used examples to examine the characteristics of different personal values related to energy use in their school (their own and others’) and behaviours associated with them.

*“42% of students in our survey said they switch off lights when they leave a room, compared with 93% of adults in the school who we surveyed. When asked why do you turn off the light when you leave the room? 72% of people who do said it was to save power, 13% said it was because it was just habit. 15% said it was because it was a rule in their house. All of the adults I surveyed said they understood the importance of saving energy, but that they didn’t all go out of their way to conserve power. (Examples of personal values discussed.) It is just myself and Mum and Dad at home, we need to reduce our power bill to save money. We remind each other if we forget to turn the TV off at the wall each night and turn the lights off when we leave a room. I suppose my values about energy use are that I am doing what my parents expect, and also know that it is good in the wider picture too. I don’t waste power, but this is mainly because it is a habit now, not because I really think about it. Other people said the same.”** Drawn informed conclusions about why certain personal values related to energy use in their school (their own and others’) and associated behaviours have implications for a sustainable future, based on examples and linked to evidence.

*“We know in New Zealand we need to conserve power. There is only so much we generate through renewable resources – water, wind, solar, thermal, and the rest is still coal, gas or oil generated (statistics and data about proportions quoted). Although we know this, we still waste a lot of power in our school. For example… (own data quoted). It is school policy during Terms 2 and 3 to run the boiler system every day throughout all rooms, which uses a lot of coal. Many people that we surveyed said they don’t make a point of closing classrooms doors during this time (own data quoted), which shows that they don’t value making the most of the heat provided, and in turn reducing the amount of coal used. People do have different values and behaviours towards energy use. In our survey we found that…. Saving money motivates some to be sustainable about energy use in our school, particularly those responsible for budgeting and policy such as the principal; others want to look after our environment (examples provided from own data). People who value the environment are more likely to save power, and conserve energy, not wasting it, because they know that if we use too much energy the country needs to fire up the fossil fuel burning power plants. This has negative effects on our atmosphere and is unsustainable in the long run (reasons provided). Some people don’t think about the future, as they value the things that use power more, and behave as if there is plenty and there always will be. The people who save power are contributing more to a sustainable future (reasons provided).”*In addition to presenting their findings, the student has submitted a logbook containing evidence of their individual contributions, if they were part of a group.*The examples above are indicative samples only.* | Demonstrate comprehensive understanding of how personal values have implications for a sustainable future. The student has:* Used examples to examine the characteristics of different personal values related to energy use in their school (their own and others’) and behaviours associated with them.

*“42% of students in our survey said they switch off lights when they leave a room, compared with 93% of adults in the school who we surveyed. When asked why do you turn off the light when you leave the room? 72% of people who do said it was to save power, 13% said it was because it was just habit. 15% said it was because it was a rule in their house. All of the adults I surveyed said they understood the importance of saving energy, but that they didn’t all go out of their way to conserve power. (Examples of personal values discussed.) It is just myself and Mum and Dad at home, we need to reduce our power bill to save money. We remind each other if we forget to turn the TV off at the wall each night and turn the lights off when we leave a room. I suppose my values about energy use are that I am doing what my parents expect, and also know that it is good in the wider picture too. I don’t waste power, but this is mainly because it is a habit now, not because I really think about it. Other people said the same.”** Drawn informed conclusions about why certain personal values related to energy use in their school (their own and others’) and associated behaviours have implications for a sustainable future, based on examples and linked to evidence.

*“We know in New Zealand we need to conserve power. There is only so much we generate through renewable resources – water, wind, solar, thermal, and the rest is still coal, gas or oil generated (statistics and data about proportions quoted). Although we know this, we still waste a lot of power in our school. For example… (own data quoted). It is school policy during Terms 2 and 3 to run the boiler system every day throughout all rooms, which uses a lot of coal. Many people that we surveyed said they don’t make a point of closing classrooms doors during this time (own data quoted), which shows that they don’t value making the most of the heat provided, and in turn reducing the amount of coal used. People do have different values and behaviours towards energy use. In our survey we found that…. Saving money motivates some to be sustainable about energy use in our school, particularly those responsible for budgeting and policy such as the principal; others want to look after our environment (examples provided from own data). People who value the environment are more likely to save power, and conserve energy, not wasting it, because they know that if we use too much energy the country needs to fire up the fossil fuel burning power plants. This has negative effects on our atmosphere and is unsustainable in the long run (provided reasons). Some people don’t think about the future, as they value the things that use power more, and behave as if there is plenty and there always will be. The people who save power are contributing more to a sustainable future (reasons provided).”** Drawn justified conclusions based on examples and evidence about how or why some different personal values related to energy use in their school (their own and others’) and associated behaviours are more likely to lead to a sustainable future than others.

*“Most people know that using energy wisely is the right thing to do for the environment and economy but this doesn’t always equate to the right behaviour. If we want to have a sustainable future there needs to be a shift in people’s behaviour related to their values. Sustainable behaviours related to energy use will contribute to a more sustainable future by reducing our need to rely on fossil fuel electricity generation. Some people in our survey said that at home their houses have been fitted with solar panels to produce some of their own water heating or electricity. They save (quoted data from research). We don’t all have this advantage, but there are some small things we can all do that will also help. If we all turned off the lights, and turned off our appliances instead of having them on standby when we aren’t using them we could save….. (quoted data). When many of us at a school start to conserve energy by modelling this behaviour, it will become the norm and entrenched in our peers’ behaviour as well. New Zealand will be able to cope with the increasing demand for energy by using renewable forms of generation if we reduce our use (research quoted).This is what has happened for some of our cities especially when power cuts happen and you are without power for some time, people value it more when it comes back. If we don’t, like the people who use the electricity without thinking to conserve it, then….”*In addition to presenting their findings, the student has submitted a logbook containing evidence of their individual contributions, if they were part of a group.*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.