

HOME ECONOMICS HEO2008T1

INTERNAL ASSESSMENT ACTIVITY

UNIT STANDARD 12359 (VERSION 5)

Describe household conservation strategies

Level 2, Internal assessment

3 credits

STUDENT INSTRUCTIONS

Overview

In this activity you will:

- describe household conservation strategies in relation to energy consumption
- describe household conservation strategies in relation to food
- describe household conservation strategies in relation to non-food consumables.

Conditions

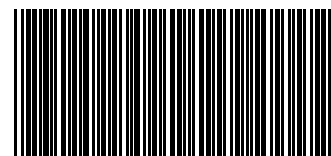
- This must be your own work.
- It is an open book assessment, you may refer back to any part of the module while you do it.
- There is no time limit for this activity; you will be guided to do it in stages as you work through HEO2008.
- Plagiarism detection software may be used to check this is your own work.

You will need:

- HEO2008 module.

Supervisor requirements

- Supervision is not required for this assessment.
- Upload your assessment to the HEO2008T1 assessment dropbox when you have completed it.



ASSESSMENT CRITERIA

UNIT STANDARD 12359 (VERSION 5)

Describe household conservation strategies

People credited with this standard are able to describe household conservation strategies.

Outcome		Evidence requirements	Range
Describe household conservation strategies	1.1	Appliances are described in terms of their estimated energy consumption over a period of twelve months.	
	1.2	Ways of conserving household energy are described.	Evidence of three different ways.
	1.3	Storage options for perishable food are described which maintain food quality.	
	1.4	Methods for repurposing unwanted household food are described in terms of safety and the impact on the environment.	
	1.5	Methods for repurposing used paper, plastic bags and metal objects are described in terms of safety and the impact on the environment.	Evidence of two methods.
	1.6	Safe disposal methods for unwanted household paper, plastic, glass, chemicals and metals are described in terms of minimal impact on the environment.	

ASSESSMENT ACTIVITY

HOME ECONOMICS

INSTRUCTIONS

- Read the questions carefully and write your answers in the spaces provided.

SCENARIO

Mr and Mrs Lightbulb, their two young children and their baby live in a dark, damp, uninsulated 1920s house in the suburbs.

They use electric heaters in every room and throw all their rubbish into a wheelie bin. The house is on a large section with fruit trees and an overgrown garden. They have a dog and three hens.

They have a high electricity bill each month, and need to develop some conservation strategies to reduce energy use and waste.



TASK 1

Choose **four** ways of **conserving energy** for the Lightbulb family to use on an ongoing basis.

Complete the chart on the next page with as much information as possible. (You can use the checklist in lesson 1 to help you.)

After completing the chart turn back to lesson 2 in HEO2008.

ASSESSMENT ACTIVITY

Action taken	Energy now conserved
Example: Check regularly that the oven door closes properly. Watch for excessive steam or heating of outside oven.	A sealed oven will use less energy to heat up and will maintain its heat longer. This will make it more energy efficient.
1.	
2.	
3.	
4.	

TASK 2A

The Lightbulb family are planning to replace the electric heaters in their lounge with a heat pump. They have collected information about three ENERGY STAR models available locally.

1. What benefit is there in choosing an ENERGY STAR appliance?
2. Compare the information given in the chart below. Circle the best choice for the Lightbulb family.

ENERGY STAR RATED HEAT PUMPS				
Brand	Model	Cost	Heat output	Running cost for 1 year
Fujitsu	ASTA09LCC	\$1520	3.6 KW	\$294
Mitsubishi	SRF252JX-S	\$2499	3.4 KW	\$253
Panasonic	CS-E9GFEW	\$1735	3.6 KW	\$303

3. Justify why you have made this choice in terms of the:
 - initial purchase cost
 - estimated energy consumption over a period of twelve months.
 (**Justify** means to describe/compare/analyse/explain.)

ASSESSMENT ACTIVITY

TASK 2B

Mrs Lightbulb has inherited some money and decided to buy a new washing machine and fridge/freezer.

They have collected information on three **Energy star** models for each appliance.

ENERGY STAR RATED UPRIGHT FRIDGE/FREEZERS					
Brand	Model	Cost	Capacity	Annual Kwh	Running cost for 1 year
Fisher and Paykel	E402B Bottommount White	\$1679	403 litres	515Kwh	\$124
Fisher and Paykel	E381T Bottommount White	\$929	380 litres	417Kwh	\$100
Westinghouse	WBE51005B Bottommount White	\$1799	400 litres	520Kwh	\$131



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ENERGY STAR RATED WASHING MACHINES						
Brand	Model	Cost	Capacity	Annual Kwh	Running cost for 1 year	Cold water per wash
Fisher and Paykel	WL80T65 Top loader	\$1899	8 kg	369Kwh	\$87	67.2 litres
Electrolux	EFW1481 Front Loader	\$1600	8 kg	330Kwh	\$79	55.9 litres
BOSCH	WAS32742AU Front Loader	\$2756	8 kg	328Kwh	\$76	57 litres

- Compare the information given in the charts above and **circle** the best choice of **washing machine** and **fridge/freezer** for the Lightbulb family.

2. Justify why you have made these choices in terms of:
- initial purchase cost
 - estimated energy consumption over a period of twelve months.
 - Washing machine
 - Fridge/freezer

Now turn back to HEO2008 and complete lesson 3.

ASSESSMENT ACTIVITY

TASK 3A

The Lightbulb family have gathered pears and apples from their trees.

Considering the impact on the environment, suggest at least three methods (conservation strategies) of utilising the fruit and scraps.

Record your ideas on the chart below.

Conservation strategy	How does this benefit/affect the environment?
Example: Give excess fruit to neighbours and friends.	<ul style="list-style-type: none">• Shares the fruit around• No waste to landfill• Maximum use of fruit collected
1.	
2.	
3.	
4.	

Now turn back to HEO2008 and continue with lesson 3.

TASK 3B

Describe storage options for perishable food which maintain food quality.

Complete the chart by describing how the quality of each type of food can be maintained over the short and long term. Consider time, containers, place and conditions for storage.

Food	Quality short-term storage	Quality long-term storage
Example: cheese	Store in fridge in a sealed container or bag. Check use by date.	Grate and freeze. Freeze as a block (store for 1–2 years)
Fresh fruit and vegetables e.g. tomatoes		
Bread products e.g. sliced bread		
Dairy products e.g. yoghurt		
Meat products e.g. mince (raw and cooked)		

ASSESSMENT ACTIVITY

TASK 4

In this task you will safely re-use leftover food in a dish of your choice.

To do this you will need to cook and safely store a staple food.

You may plan tonight's meal to include a staple food e.g. rice, potato, pasta.

Cook double quantity so you have some leftover staple food to complete the following practical task.

You will need either:

- 2 cups cooked rice, or
- 2 cups cooked potato, or
- 2 cups cooked pasta.



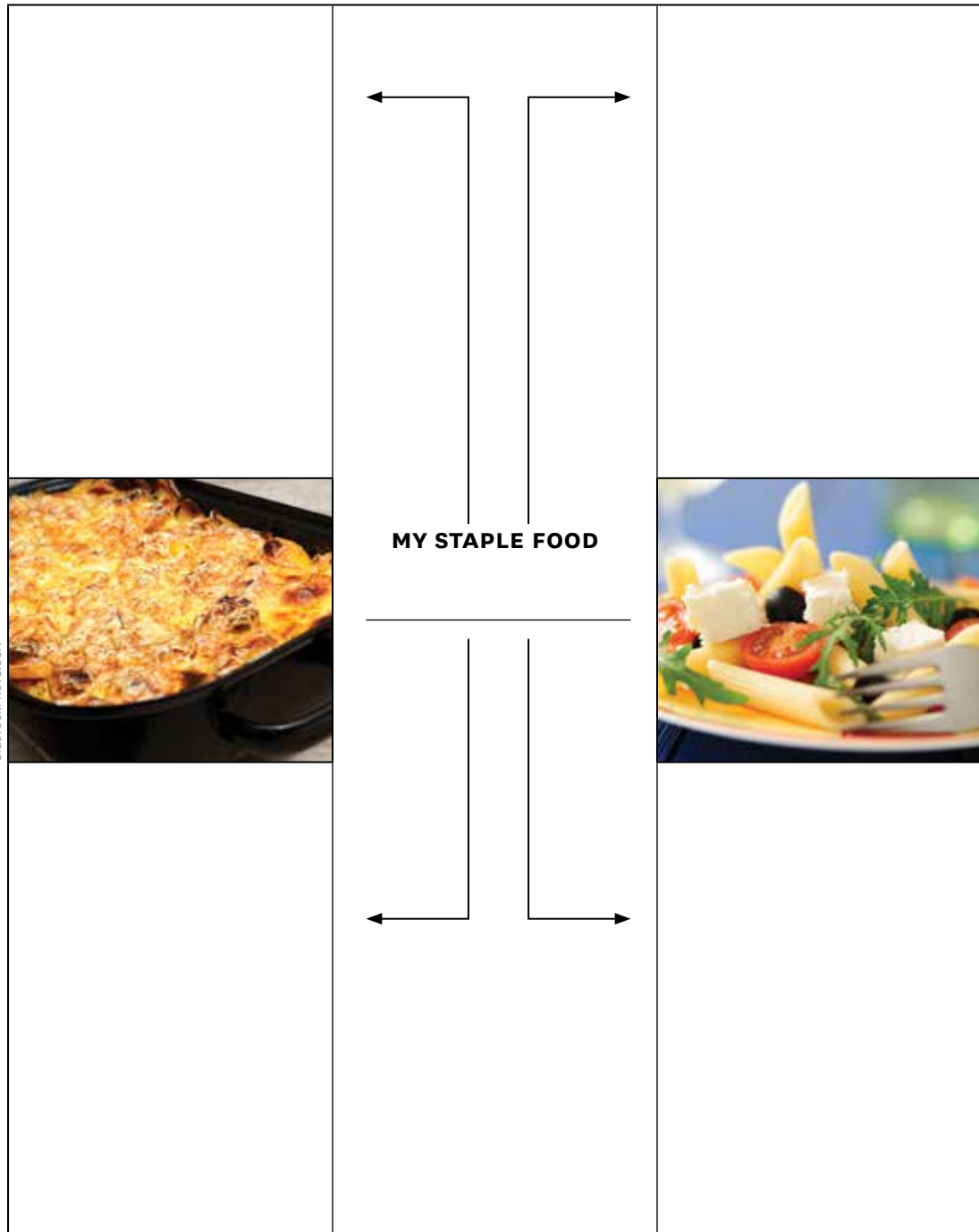
PREPARE AND STORE YOUR STAPLE FOOD

1. Circle the staple food you cooked.
2. Describe how you stored the leftover staple food safely.



Attach a photo showing how you stored the leftover staple food.

3. Complete the mind map below with possible ideas of how you could re-use your leftover staple food to make a dish/meal.



PRACTICAL COOKING

Choose one of your ideas from above to prepare a meal for your family.

4. Circle the idea you have chosen.

Attach the **recipe** and a **photograph** of the meal/dish you cooked.

Now turn back to HEO2008 and complete lesson 5.



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TASK 5A

HELP UNPACK THE LIGHTBULB'S WHEELIE BIN



1. Describe ways each item listed below could be repurposed safely.
 - Used paper
 - Used plastic bags
 - Used metal objects
 - How will repurposing these items impact the environment?

TASK 5B

1. Describe a **safe disposal** method for each of the following household items and explain how this will minimise harmful **impact on the environment**.
 - Paper
 - Plastic
 - Glass
 - Chemicals
 - Metals



Upload your completed assessment to the HEO2008T1 assessment dropbox.

ACKNOWLEDGEMENTS

Every effort has been made to acknowledge and contact copyright holders. Te Aho o Te Kura Pounamu apologies for any omissions and welcomes more accurate information.

Photo

iStockphoto, Coffee talk, 8354002

iStockphoto, Recycling a drink bottle, 4624887

iStockphoto, Domestic refrigerator vector, 18654665

iStockphoto, Washing machine, 4337792

iStockphoto, Rice in a wooden bowl, 17810616

iStockphoto, Macaroni, 14768669

iStockphoto, Pasta salad, 15306458

iStockphoto, Rubbish bin, 15369116

Bigstockphoto, Rooster and chickens, 940497

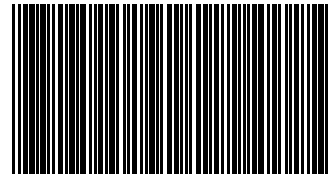
Bigstockphoto, Potato isolated on a white background, 12734699

Bigstockphoto, Metallic paper clip, 317552

Bigstockphoto, Scalloped potatoes in the pan 21080669

mychillybin, Yellow house with kowhai, 100093_406

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STUDENTS - PLACE STUDENT ADDRESS LABEL BELOW OR WRITE IN YOUR DETAILS.

Full Name _____

ID No. _____

Address
(if changed) _____