

A new invention

LINKS TO:

Stage 3, Module 13

 Learning Object 3: *Glue the fins to the bottle*

Exercise 1

Sample answers:

1.1 Summarise, in English, the main ideas from each section of the text.

Overview

The overview gives the name of the invention, a brief description of the reason it has been invented, and a brief biography of the inventor. It also includes contact details for the inventor.

Inspiration

The inspiration section includes a brief narrative summarising when, where and how the inventor came up with the idea of inventing a Water Miser.

How it works

This section gives a brief summary of how the Water Miser works. The description includes details about safety features, installation, how it is used, and how the saved water is collected.

1.2 Were there particular words or phrases you found difficult to understand? What strategies did you use to understand these words or phrases, or to understand the text as a whole?

There are not many words or phrases that I found difficult in this text. However, to understand words or phrases that are difficult, I usually use the following strategies:

For simple words or phrases such as *percuma* or *sumber daya*, I would consult a dictionary.

For words with affixes, I would try to work out what the base word is first, before consulting a dictionary. For example, the words *penemu* and *pengguna*. I know that the prefix *peN~* can indicate an actor, so I

deduce that *penemu* comes from the word *temu* and *pengguna* from *guna*. Therefore, I now know that *penemu* means 'inventor' and *pengguna* means 'user'.

For phrases that I don't understand, such as *Air yang sedianya akan dibuang percuma*, I would look at the context and see if I can understand the words preceding or following that difficult phrase. The word *sedianya* confused me. I know that *sedia* means 'available', but I could not work out what *sedianya* means in that context. It was in the online dictionary that I finally found that *sedianya* means 'originally' or 'was intended to'.

1.3 What is the name of Irma Hidayat's invention?

Penghemat Air.

1.4 Why has she invented this device?

Irma Hidayat has invented this device because she is concerned about the amount of water that is wasted while people wait for their showers to heat up. In the patent application, it states that Irma Hidayat enjoys leisure activities in the water, and that she lives in an area where there are frequent water shortages, which may have made her more conscious of the need to avoid wasting water.

1.5 How does the device work?

The device works by collecting water that would otherwise be wasted, and diverting it to either a holding tank, or to the toilet cistern.

1.6 Write Irma Hidayat's text for the final section of the application, in Indonesian, describing the impact her invention could have on the environment.

Irma Hidayat melakukan penelitian yang menunjukkan bahwa, sementara menunggu air menjadi panas, rata-rata sebanyak 15 liter air dibuang oleh satu orang setiap harinya. Ada 8½ juta orang yang hidup di Jakarta. Kalau pun hanya 10%nya dari semua orang yang hidup di sana memasang alat Penghemat Air ini, air yang dihemat jumlahnya lebih dari 12 juta liter setiap hari.

Exercise 2

Sample answers:

2.1 What do you think our ethical responsibilities are in terms of current water usage? Write your answer in Indonesian.

Pada dasarnya, saya percaya bahwa setiap orang punya hak untuk mendapat akses terhadap air dalam jumlah yang cukup untuk kehidupannya. Ada perbedaan mengenai jumlah air yang kita butuhkan, dan jumlah air yang kita inginkan. Sebagai contoh, walaupun saya ingin menikmati mandi dengan pancuran menggunakan air panas sepuasnya pada musim dingin, saya hanya memerlukan mandi sebentar saja untuk menjadi bersih. Saya pikir, membedakan antara kebutuhan dan keinginan dalam hubungannya dengan penggunaan air merupakan dasar yang baik untuk membuat keputusan yang bermoral.

Saya juga berpendapat bahwa penting untuk menyeimbangkan kebutuhan perseorangan dengan kebutuhan kelompok atau perusahaan. Kalau sumber daya air terbatas, seperti misalnya pada musim kemarau, saya pikir seharusnya orang mempertimbangkan dampak pembatasan penggunaan air ini bagi perseorangan dan bagi organisasi maupun perusahaan. Misalnya, paman saya menjadi anggota sebuah koperasi petani. Koperasi ini mendukung keluarganya dan keluarga dari lima orang lainnya dengan cara menanam tebu.

Untuk menjamin hasil yang tinggi kualitasnya mereka menggunakan air dengan cukup banyak. Kalau air yang boleh digunakan oleh paman saya dibatasi, akibatnya untuk koperasi, untuk perusahaan dan untuk perseorangan yang membeli hasil tanamannya — baik sebelum maupun setelah diproses — akan sangat merugikan. Sebuah keputusan yang bermoral mengenai apakah akses koperasi tersebut terhadap air harus dibatasi harus mempertimbangkan dampaknya pada kesehatan dan kesejahteraan anggota koperasi dan mereka yang mengandalkan hasil tanamannya untuk kelangsungan hidupnya.

2.2 What do you think our ethical responsibilities are to future generations of water users? Write your answer in English.

I think it is important for us to consider the impact our current water usage will have on future generations. I believe that to make ethical decisions about water usage, we should consider the positive and negative impacts our decision will have on the quality, quantity, and availability of water in the future. I don't think that it is ethical for us to think only in the short term, and to create problems that the water users of the future will have to solve.

2.3 What ethical responsibilities do you think we have to the flora and fauna which live in, or rely on, the water resources we share with them? Write your answer in English.

I think we do have an ethical responsibility to ensure that animals and plants are considered when making decisions about water usage, storage and harvesting. We need to take responsibility for considering their needs as well as our own.

For example, recently there were plans to dam a river near my home. The people who were planning the dam were required to investigate the impact the dam would have on animals and plants. I think that it was good ethical practice to insist on the investigation.

The report that resulted from the investigation identified at least four species that would be adversely affected if the dam went ahead. One of the species was endangered. Because of the report, the plans for the dam were eventually abandoned.

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I think this was an ethically sound decision. In making the decision, the people involved weighed up our own water needs against the impact the dam would have on the local wildlife. In making their decision, they also considered whether there were alternatives to building the dam in terms of meeting both the short-term and long-term needs of people in the area.