



# Eco Warrior Challenge

## Student booklet

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### **Your task:**

The City of Swan has hired you to investigate the life cycle of a single-use product. Make use of your abilities as communicators, researchers, collaborators, innovators and problem solvers to propose an alternative circular life cycle for this product.



## Part one: understanding the challenge

### The big waste issue

The most recent waste report in Western Australia showed that 6.7 million tonnes of waste was produced in the 2021/22 financial year. Of this, 2.5 million tonnes were sent to landfill.

That's about 40 per cent of all waste materials being disposed of to landfill, wasting valuable materials on a planet with finite resources.

Sending these materials to landfill has a huge impact – not only is it wasteful but it can also have negative effects on the environment.

It means more raw materials must be removed from the Earth and more energy and water used to make new materials and products.

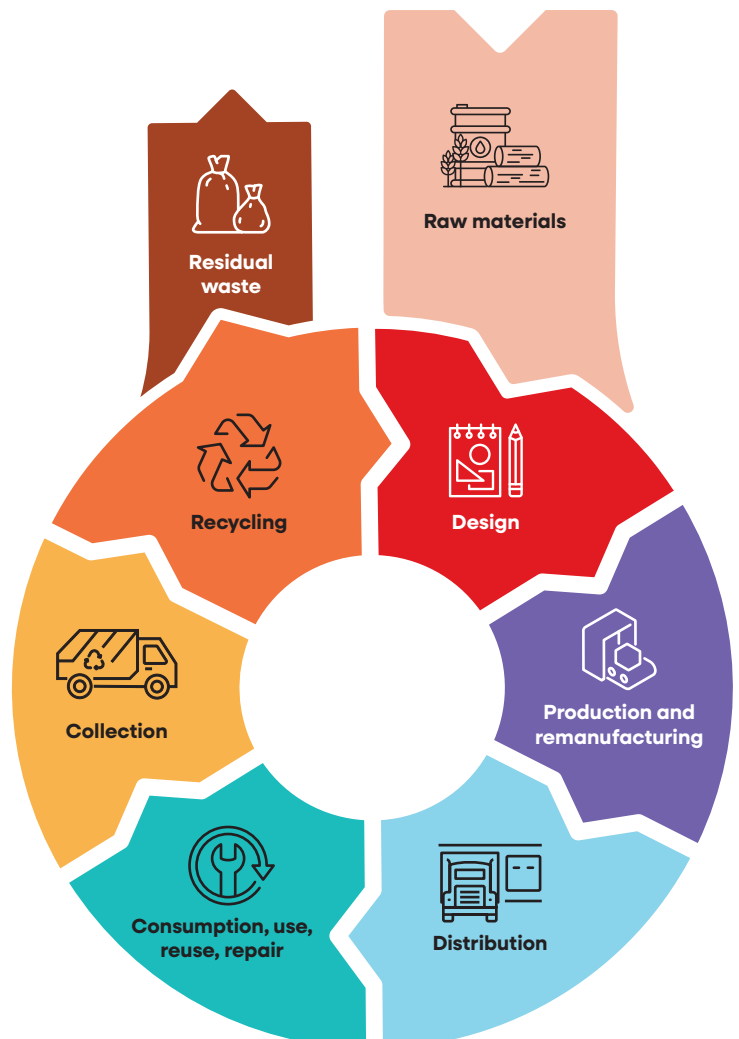
It also encourages a culture of consumption where the value of materials at the end of their life is not recognised or appreciated.

We need to transition from this current linear system to a circular one – keeping valuable resources in the economy for longer – so that humans and the planet can benefit.

### Linear economy



### Circular economy



## Task

Visit [www.swan.wa.gov.au/eco-warrior-challenge-videos](http://www.swan.wa.gov.au/eco-warrior-challenge-videos) and watch these videos to help you answer the questions:

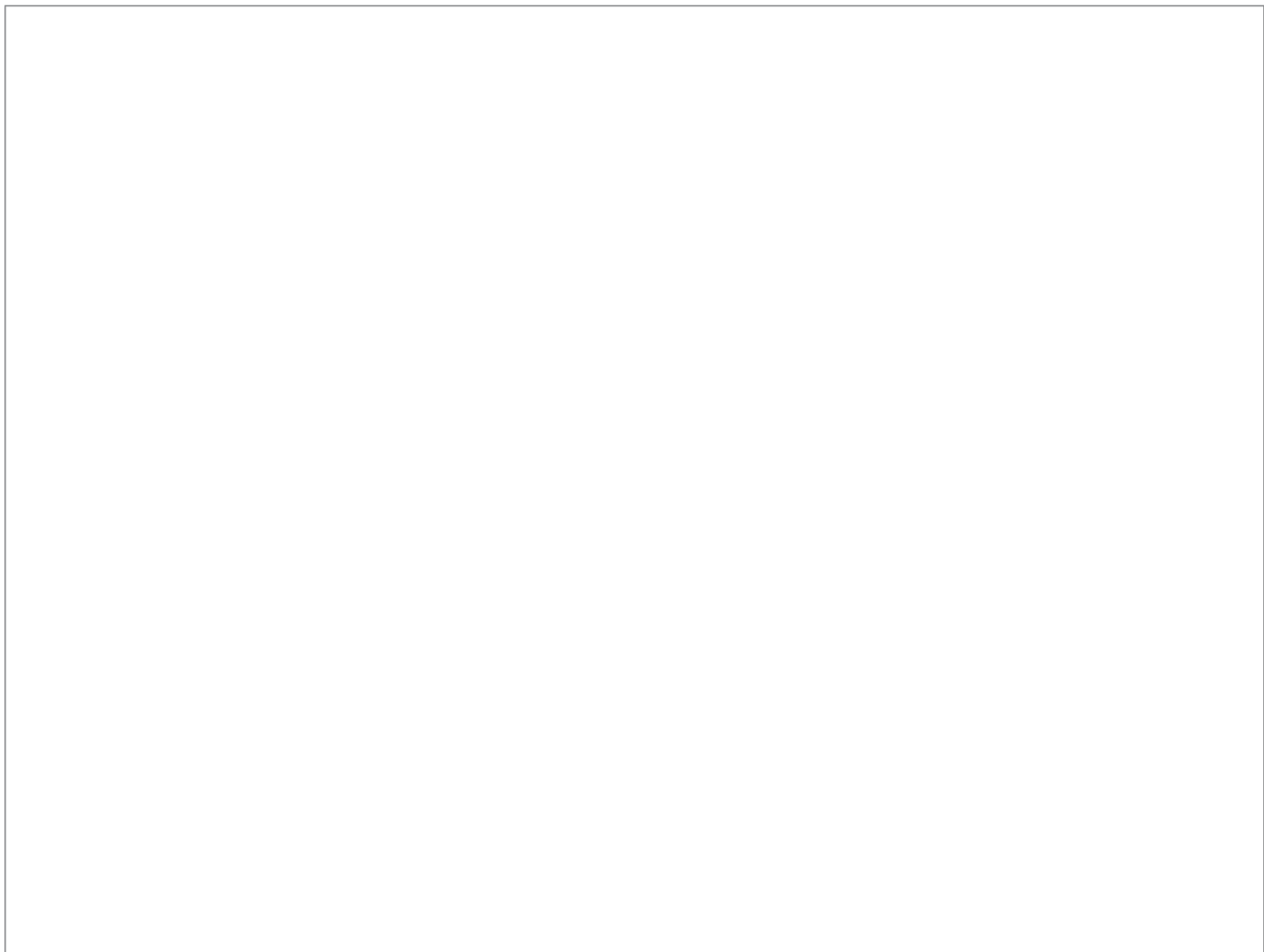
- Video 1: Explaining the circular economy and how society can re-think progress
- Video 2: The circular economy: a new way to design, make, and use things

### 1. Create a definition for the following terms.

Linear economy	Circular economy

### 2. List the benefits of moving to a circular economy.

**3. Draw what the circular economy could look like for an orange peel.**  
**Refer to video 2.**



## Part two: creating a solution by moving to a circular economy

### 1. Think about items you throw away on a regular basis – could any of these have another purpose?

Brainstorm some items that are regularly thrown away in the space below.

*E.g. pencils, tyres, glasses, paper, plastic packaging etc.*

Think about items you use at home and at school.

### 2. Choose one item from your brainstorm above and propose an alternative circular life cycle.

#### You will need to:

- Investigate the different stages of the production process for your item (see graphic below)
- Think about the product and its purpose. Research or develop new sustainable ideas to achieve the same product/purpose
- Think about the end of life of the product, are there any other possibilities for reuse/repurpose?

#### Examples of solutions:

Visit [www.swan.wa.gov.au/eco-warrior-challenge-videos](http://www.swan.wa.gov.au/eco-warrior-challenge-videos) and watch these videos to see examples of sustainable alternatives:

- Video 3: Hair mats for oil spills
- Video 4: Biodegradable food packaging
- Video 5: Fungi for packaging instead of plastic

## Part three: presentation

Your team will need to create a presentation showing the new sustainable circular economy you have created for your chosen item, for the City of Swan.

Make sure your presentation shows/represents a circular loop/pathway of the item going through the economy.

Presentation ideas:

- Storyboard
- Poster
- Song
- Video
- Model
- Blog
- Animation.

Please submit your entry on [www.swan.wa.gov.au/eco-warrior-challenge](http://www.swan.wa.gov.au/eco-warrior-challenge)