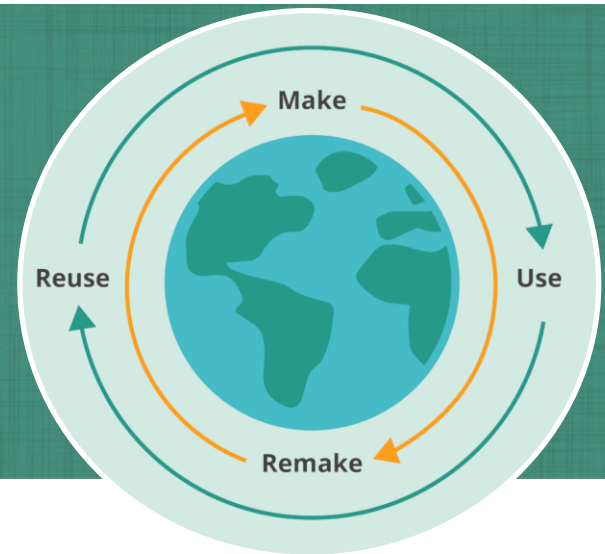


How Can a Circular Economy Solve the Problem of Plastic Waste?

#Eco360
Activity
Grade Level: 9-12

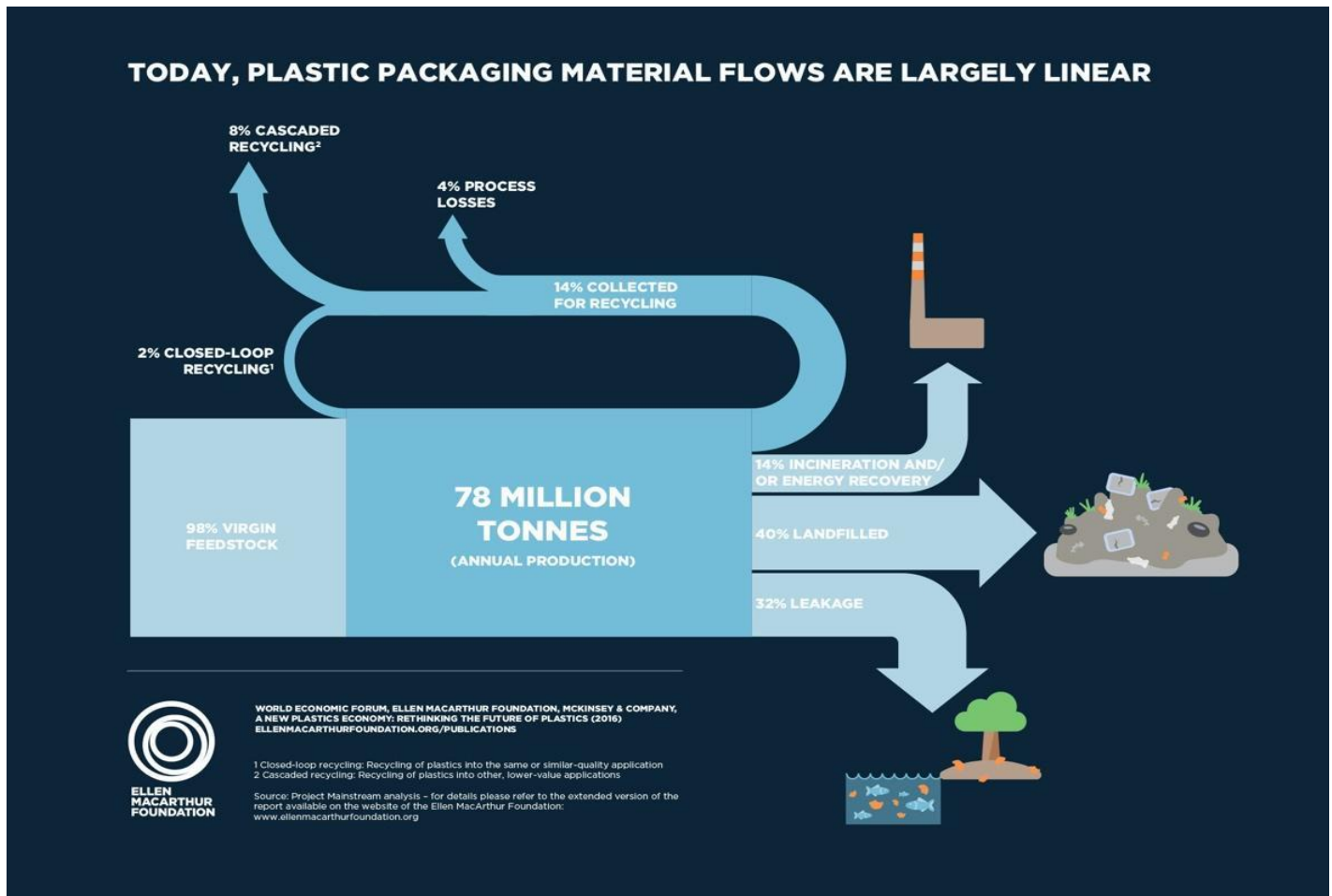


With our current economy designed linearly focused on a take, make, use and discard model, the world is faced with a huge challenge of plastic waste. Plastic waste is everywhere, polluting our lands, air, and especially marine environments.

Linear Economy: Take ► Make ► Use ► Dispose

A linear economy works fine for a small community of consumers. On a global scale with billions of consumers becoming part of our economy, a linear system becomes unsustainable. We are running out of raw materials to create new products for everyone. Landfills are filling up with the massive increase in disposal of waste - products that are no longer in use. This is a challenge that requires changing the way we think of our economy today.

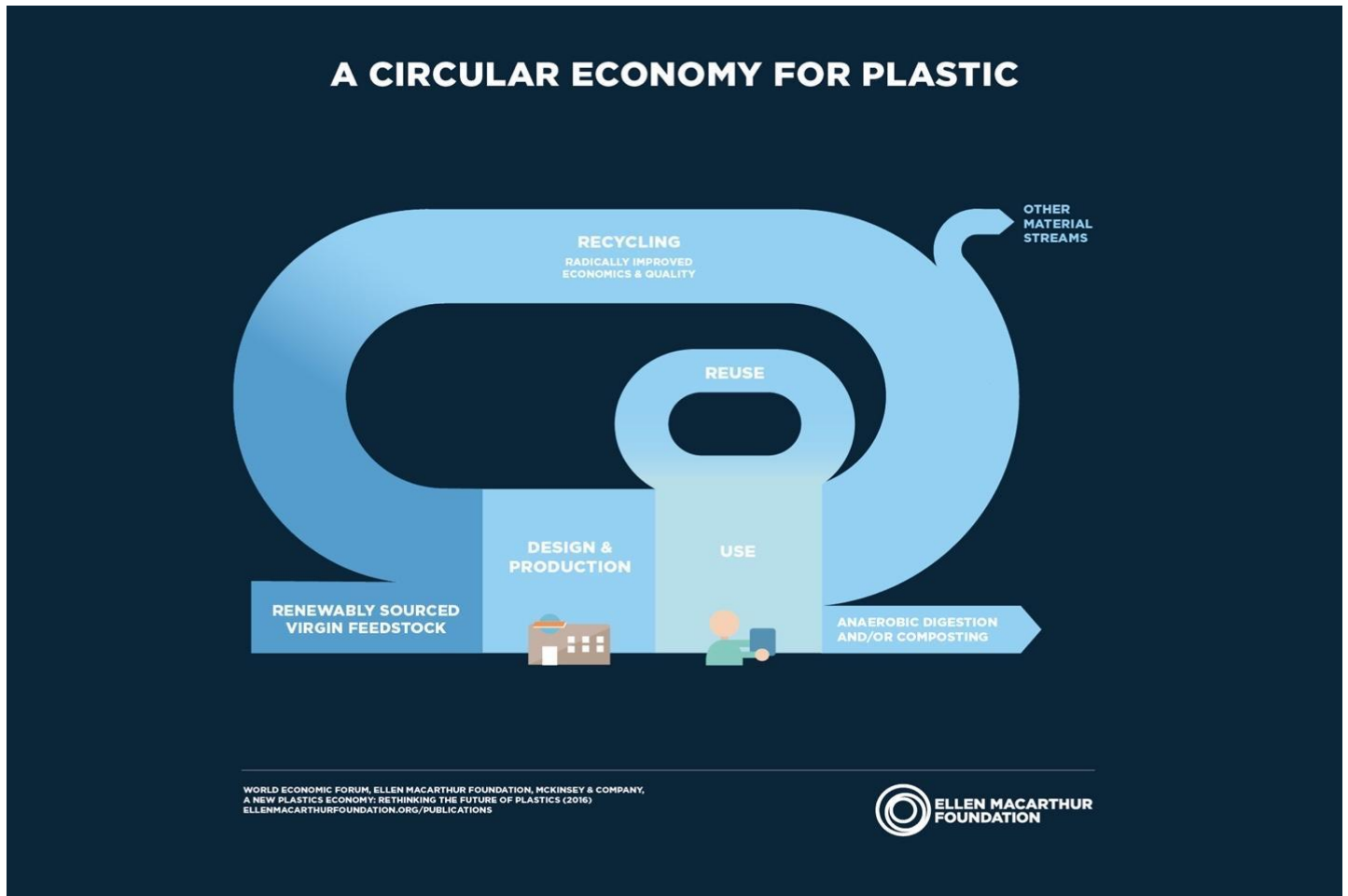
The linear plastic system has created a huge challenge of plastic waste for the global community, see figure below. It is estimated that most of the plastic packaging is used only once, and only 14% is recycled (Ellen McArthur Foundation, 2021).



Source: <https://www.ellenmacarthurfoundation.org/explore/plastics-and-the-circular-economy>

So, how can we design a better economic model that reduces waste going into landfills?

The answer is redesigning the entire system to a circular economy. Much like the natural world where there is no waste generated that requires disposal to a landfill, a **circular economy** works similarly. Raw materials and products are used and reused as many times as possible to reduce the extraction of new raw materials. This also reduces the amount of waste going to landfills. We need to move to a plastic system that creates no plastic waste or pollution. “From the outset, [plastic] products and the systems they sit within should be designed to ensure no materials are lost, no toxins leaked, and the maximum use is achieved from every process, material and component” (Ellen McArthur Foundation, 2021).



Source: <https://www.ellenmacarthurfoundation.org/explore/plastics-and-the-circular-economy>

We can achieve a circular economy for plastics by adopting the following vision presented by the Ellen McArthur Foundation, see figure below:

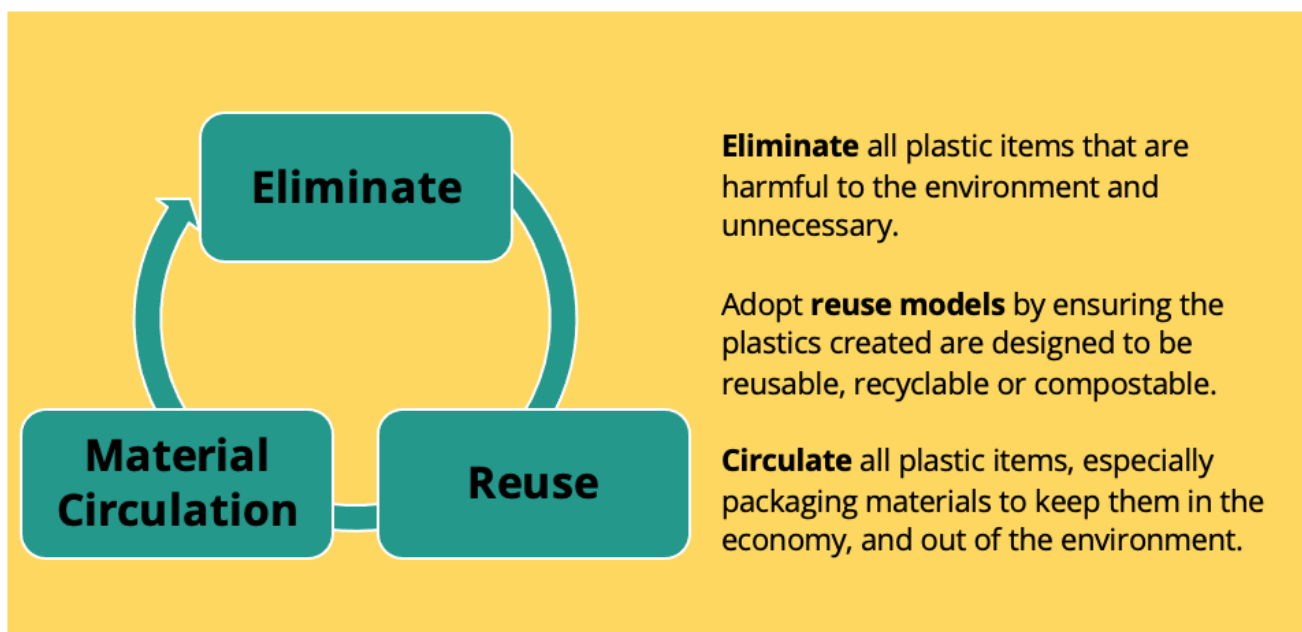
What is the vision for a circular economy for plastic?

The vision for a circular economy for plastic has six key points:

- 1 Elimination of problematic or unnecessary plastic packaging through redesign, innovation, and new delivery models is a priority
- 2 Reuse models are applied where relevant, reducing the need for single-use packaging
- 3 All plastic packaging is 100% reusable, recyclable, or compostable
- 4 All plastic packaging is reused, recycled, or composted in practice
- 5 The use of plastic is fully decoupled from the consumption of finite resources
- 6 All plastic packaging is free of hazardous chemicals, and the health, safety, and rights of all people involved are respected



Circular Economy for Plastics



Source for information: (Ellen McArthur Foundation, 2021).

Additional resources on the circular economy of plastics:

- <https://www.ellenmacarthurfoundation.org/explore/plastics-and-the-circular-economy>
- https://www.accenture.com/ca-en/about/events/the-circular-economy-handbook?c=acn_glb_greenbehindthecgoogle_11633510&n=psgs_1020&gclid=Cj0KCQiAgo mBBhDXARIsAFNyUqP-L RKswWw-P BO9Di igbjdvuasFLso0Rv8xC97H-fBjOSW-0OdlAqgJEALw_wcB&gclsrc=aw.ds
- <https://www.greengrowthknowledge.org/research/vision-circular-economy-plastics-canada-benefits-plastics-without-waste-and-how-we-get-it>

Bibliography

Ellen McArthur Foundation. (2021). *Plastics and circular economy*. Retrieved from Ellen McArthur Foundation: ellenmacarthurfoundation