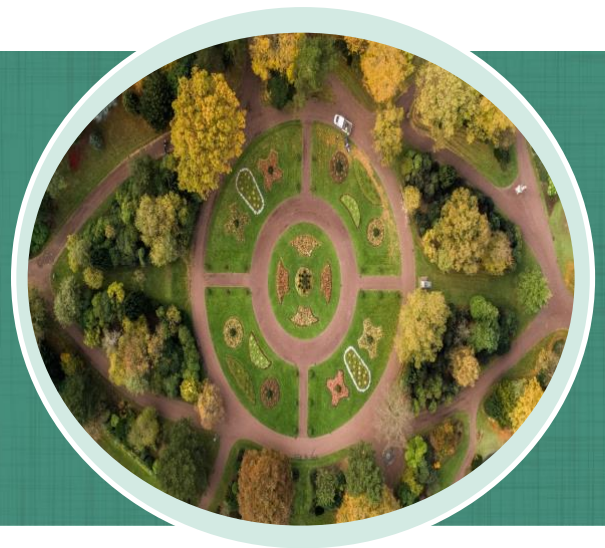# Imagine a Waste-Free Economy

Eco 360 Jr
Backgrounder
Grade Level: 3-8

Have you noticed how much waste is created in our economy every day? And have you ever wondered why that is the case? It is because our economy follows a linear model - one where we

Take → Make → Use → Dispose

Take: we take raw materials, which are basic materials that we use to make goods from the natural environment
Make: we make different products out of those materials.
Use: we use the products created for a certain amount of time.
Dispose: after using the product for some time, we throw it into the landfill - a place for getting rid of all waste that has no use in our economy.

Basically, when we are done with it, we throw it out.

When we look at the billions of people on the earth buying things as part of our economy, a linear system is unsustainable and doesn't work. Right now, we are quickly running out of raw materials (like wood for furniture and oil for plastic) to create new products for everyone. Landfills are filling up quickly with the huge 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.

How can we design a better system that reduces waste going into landfills?

We can take inspiration by observing our natural ecosystem to design a better system for our economy. In the natural ecosystem, there is no waste that requires it to go to a landfill. Our natural ecosystem works in a circle, where all raw materials go back to where they came from, like the water cycle (see Fig. 2). A circular economy works in a similar way, where raw materials and products are used and reused as many times as possible to so that no new materials are taken from the Earth. This also reduces the amount of waste going to landfill. Just like the natural ecosystem that uses energy from the sun to grow plants, a circular economy uses renewable energy to manufacture and deliver products.
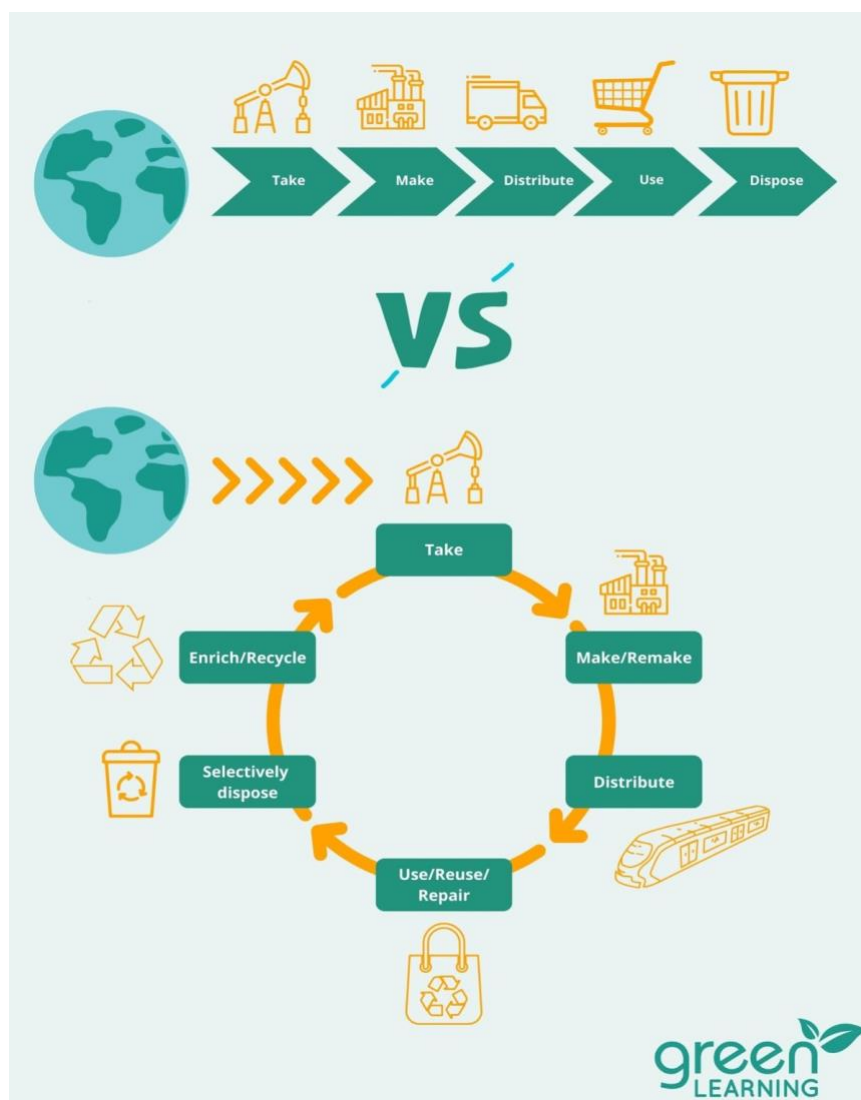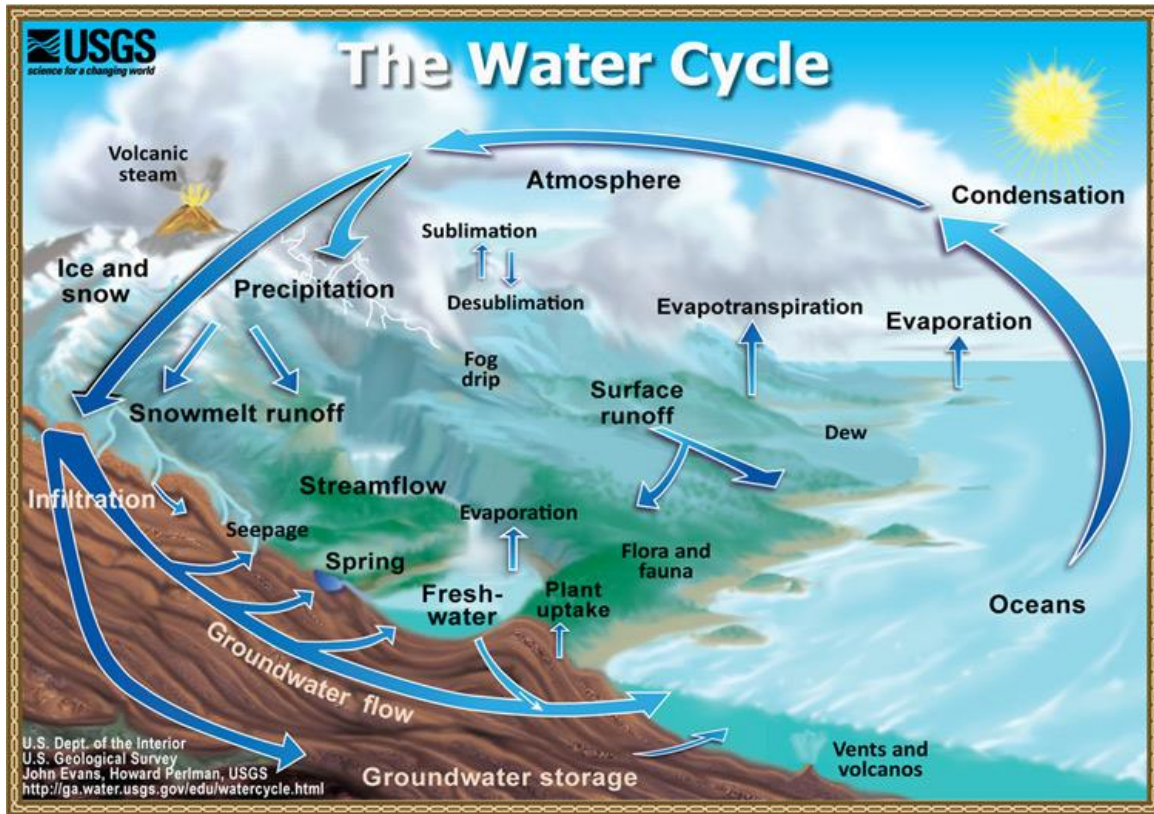

Fig. 1 Linear VS Circular Economy (GreenLearning)

Fig. 2 The Water Cycle (U.S. Geological Survey)