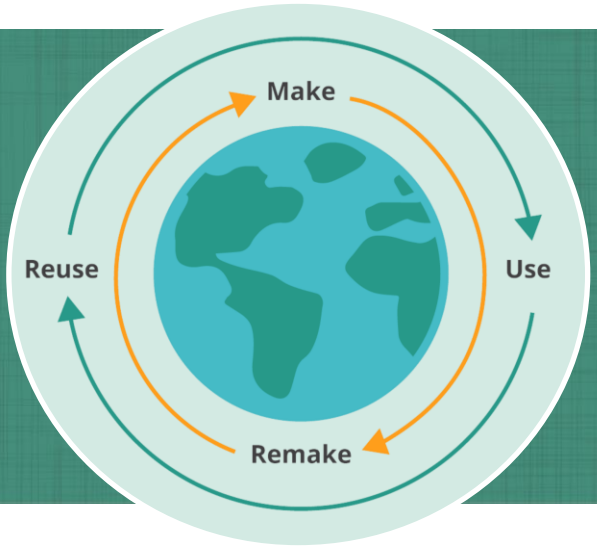
What is Biomimicry?



#Eco360
Activity
Grade Level: 9-12

Biomimicry refers to the practice of looking to nature for inspiration, learning from and mimicking strategies found in nature and applying them to solve human design challenges (Biomimicry Institute, 2021). There are three essential elements to biomimicry—emulate, ethos and re-connect.

Emulate refers to "the scientific, research-based practice of learning from and then replicating nature's forms, processes, and ecosystems to create more regenerative designs" (Biomimicry Institute, 2021).

Ethos refers to "the philosophy of understanding how life works and creating designs that continuously support and create conditions conducive to life" (Biomimicry Institute, 2021).

Re-connect refers to "the concept that we are nature and find value in connecting to our place on Earth as part of life's interconnected systems. (Re)Connect as a practice encourages us to observe and spend time in nature to understand how life works so that we may have a better ethos to emulate biological strategies in our designs" (Biomimicry Institute, 2021).

Natural ecosystems work sustainably, without creating waste that needs to be disposed of in landfills. This is because the waste generated in one organism becomes food for another organism. In this way, the natural ecosystem provides an excellent example of a perfect circular economy, where there is no waste generated and everything gets recycled. In contrast to a linear economy, the natural world follows a circular economic model, where all materials flow within the system following a circular cycle of recycling and reusing materials. Therefore, we need to learn from nature, using biomimicry, to solve the climate crisis that we face today. By taking inspiration from the natural world in designing better systems, we can move towards a circular economy that creates no waste.

More resources on biomimicry:

- Biomimicry Institute: https://biomimicry.org/
- Biomimicry toolkit: https://toolbox.biomimicry.org/introduction/
- Ask Nature: https://asknature.org/
- Biomimicry's surprising lessons from nature's engineers. Length of video: 22:58 minutes, suggested 2:00 - 6:15 minutes to learn how engineers solved a complex problem by observing the natural world: https://www.ted.com/talks/janine_benyus_biomimicry_s_surprising_lessons_from_nature_s_engineers
- The world is poorly designed. But copying nature helps. (Length: 6 minutes) https://www.youtube.com/watch?v=iMtXqTmfta0

Bibliography

Biomimicry Institute. (2021). *What is Biomimicry?* Retrieved from Biomimicry Institute: https://biomimicry.org/what-is-biomimicry/