



Art and Design

LC: Following on from the last challenge, can you look at how biomimicry impacts other industries, specifically architecture, and the importance of using nature to design future buildings?

Watch this video for some inspiration:

https://www.youtube.com/watch?v=HDWu9Xuj9oQ&feature=emb_rel

Now you've designed the perfect animal, can you design your animal a "perfect home" to with-stand a chosen weather/environment using biomimetic design?

Biomimicry definition: The design and production of man-made materials, structures, and systems that are based on natural things or processes.

Not only does Biomimicry influence functional objects that you probably use all the time, but it also impacts architecture.



When designing the ideal home, think about biomimetic design. For instance, the way that sea sponges ventilate and circulate air, impacted how the Gherkin in London ventilates air and the curved structure was designed for rainwater to run down and be collected, preventing flooding.



The Gardens by the Bay in Singapore is a collection of structures inspired by the simple form but complex nature of trees. Whilst the canopies act as water collection and solar dispersion, the shade provides cooler temperatures for the plants and wildlife below.

CREATE YOUR DESIGN! There are no rules, just let your imagination flow!



Can you design a building that can minimise our use of natural resources and help to provide for our habitats? How does your building achieve those things?

You should think about key elements such as weather proofing the building. Consider does it need to be built on stilts to prevent flooding or does it need to be built underground in case of strong winds? What about extreme heat or droughted areas? Research how to work with these things, perhaps to use to your advantage.

Extension activity: Now that you've designed your creature a home you should know a lot about biomimicry and how it affects structures.

Do some research on two or three animal homes and decide what are the most important elements humans consider when designing our own homes. For example, birds use hay, straw, and sticks to create their home but it also acts as insulation, which we use to line all our homes.