



Activity – Biomimicry at work today

Biomimicry is a transdisciplinary field, which means it incorporates knowledge from biologists, doctors, mathematicians, chemists, architects, physicists, and more. Engineering applies science and technology to solve practical problems and so is central to biomimicry and design.

Biomimicry is not simply an entertaining past-time or muse of observant individuals, but is intentionally incorporated in many different industries. Many commercial products are manufactured, in part or whole, by studying materials and processes found in nature. Learning from living creatures and natural processes can help solve scientific and technical problems that engineers work on.

For example, modern airplane designs are using biomimicry more and more. Engineers at Airbus study the natural world to generate design solutions for modern aircraft. Although the exterior of airplanes are traditionally smooth, recent Airbus airplanes have been designed with finely textured surfaces that mimic shark skin. This provides a drag-reducing surface that is well-suited for aircraft covering long distances at high speeds.





Engineers at Airbus are also studying albatross wings to figure out how the high aspect ratio of the wings (wing span divided by its width) allows this large sea bird to travel great distances with minimal flapping of its wings. Using very little effort to travel great distances allows the albatross to save energy and is something that Airbus wants to incorporate in their aircraft design.