BIOMIMICRY: Innovation inspired by nature, with a focus on sustainability. Also described as "The conscious emulation of life's genius." Learning from and then emulating biological forms, processes, and ecosystems to create more sustainable designs.

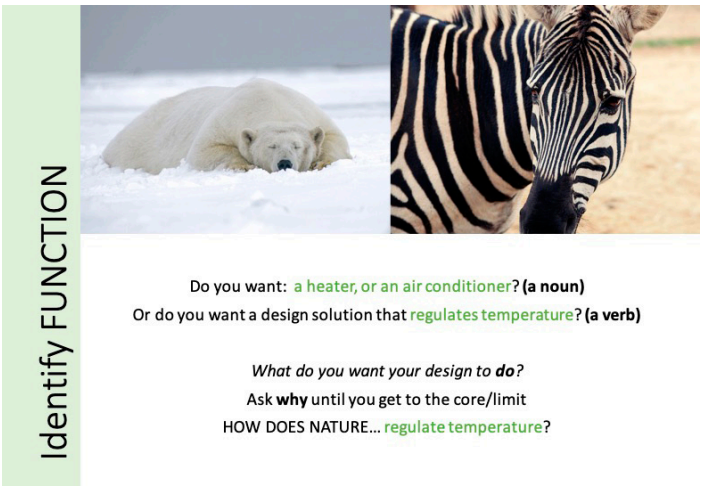
BIOLOGICALLY INSPIRED (BIOINSPIRED): Innovation inspired by nature, as above, a term commonly used in academia.

BIOMIMETICS: Innovation inspired by nature, as above, a term also commonly used in academia, particular in Europe.

BIONIKS (BIONICS): Innovation inspired by nature, as above, a term commonly used in Germany.

CHALLENGE: A specific issue or need that humans must address in their designs Also a specific issue or need that an organism faces.

FUNCTION: The outcome or role of a characteristic, mechanism, or process; what an adaptation does for an organism (to help it survive and thrive) or what a design does for its users. A function always contains a *verb*; it describes what the adaptation DOES for the organism/system. (e.g. acquiring water, accommodating growth, managing disturbance). For example, one purpose of a polar bear's fur is to keep warm, in technical terms its function is to conserve heat (insulation).



STRATEGY: Organisms meet functional needs through biological strategies. A strategy is a characteristic, mechanism or process; it describes "how" a function is accomplished. In the polar bear example, fur is the strategy for delivering insulation.

MECHANISM (**DESCRIPTION OF HOW THE STRATEGY WORKS IN MORE DETAIL):** In the polar bear example: The polar bear's fur coat is made up of two distinct layers: a short and dense underfur layer right next to the skin, and an outer layer of longer and coarser guard hairs. The guard hairs are transparent and appear to be very effective at absorbing infrared radiation. This means that heat emitted from the polar bear's warm body could be absorbed by the hairs instead of transmitted through them, where it would be lost to the cold environment.

REGENERATIVE: Restore to a better, higher, or more worthy state than the existing one. Some examples: the self-healing of broken bones (that become stronger); plants developing stronger root systems after being eaten by grazers.

DEGENERATIVE a process or state of being that extracts value and/or reduces the capacity to self-heal, restore or evolve forward.

CIRCULAR ECONOMY: The circular economy is a model of production and consumption, in which products are designed so that the technical components can be upcycled into new products. Also an approach which involves sharing, leasing, reusing, repairing and refurbishing existing materials and products as long as possible. In this way, the life cycle of products is extended, and all materials are kept within a continuous production loop.

ANALOGICAL THINKING: Seeing where a solution to one problem can be applied to solving a similar problem.

BIO-BASED MATERIAL is a material intentionally made from substances derived from living (or once-living) organisms. The definition could include many common materials such as wood and leather, but it typically refers to modern materials that have undergone more extensive processing. Bio-based materials are often biodegradable, but this is not always the case. Examples are: cellulose fibers, bioplastics, cornstarch.

See further information here: https://toolbox.biomimicry.org/references/glossary/