EnglishWaves.fr
The French radio station that speaks English !

ENVIRONMENT

Nature is a Library©

by Valentine Rinner
Vocabulary & pronunciation study by Catherine Balter Kendall©
Words are explained alongside the text
Stressed syllables are underlined and in bold*

It suddenly **went viral**… this eight-minute video clip of a neuroscientist explaining **biomimicry** and the **knowledge economy** to a room full of students, reached over five million views. Triple PhD holder Idriss Aberkane expresses what his research has been teaching him: that nature is a library - we should read it instead of burning it.

By definition, the science of biomimicry (*bios* means life, and *mimesis* to imitate) is the design of **sustainable solutions** based on nature's existing strategies to solve specific problems. The main idea behind biomimicry is the belief that Nature - due to its ability to adapt - has already optimally solved many, if not all problems we humans are **tearing our hair out about**. For example, we see CO_2 as one of the biggest problems of our time. Plants don't, they manage to use it to grow and stay alive. So how can we learn from them?

catch our coats on our Sunday **outdoor** excursions.

More than simply inspiring design, nature is a source of complex organizational models. We know that termites are able to maintain their **nest's** temperature in an extremely wide **array** of thermal conditions. A project from Loughborough University has been scanning termite **mounds to map** their three-dimensional architecture in a level of detail never **achieved** before. This computer model has helped scientists understand exactly how the tunnels

to go viral (exp.) to become popular by circulating quickly through internet and social media

the knowledge economy (exp.)an economy based on information and technology, exploiting human intelligence rather than natural resources

sustainable solutions (exp.) answers to problems that can be maintained over time without damaging the environment

to tear one's hair about/over sth. (exp.) to be intensely frustrated over a problem

outdoor (n.) outside

nest (n.) a structure made by birds and some insects to lay their eggs

array (n.) range, variety

mound (n.) a pile or rounded mass

to map (vb.) to represent on a map, to record in detail

to achieve (vb.) to do sth. successfully

and air With biomimicry, instead of merely **harvesting** and using organisms to accomplish specific functions, we observe, deconstruct and **reapply** the **underlying** design principles of some organisms or ecosystems to our own innovations. Leonardo da Vinci observed birds' anatomy for the design of his flying machines; our Eiffel tower actually mimics the distribution of forces in a human **thighbone**; new Japanese trains significantly increased their efficiency after carefully analyzing the shape of **kingfishers'** beaks; and Velcro was invented in the **forties** after eight years of studying how burdock **seeds** conduits manage to exchange gases, maintain temperature, and regulate humidity. This experiment is providing a **blueprint** for self-regulating human buildings and more generally more sustainable architectural models.

This type of research is crucial today and for our future on our planet. Indeed, we **currently** live in a world that **abides by** the theory of infinite **growth** while **relying on** the natural resources our planet has to offer, which are finite. We burn them. This infinite growth versus **finite** resources **organizational equation** is unsolvable. We just can't have infinite growth based on finite resources.

More than being a finite source of **raw materials**, Nature is an infinite source of knowledge even while we are unfortunately slowly destroying it. If we exploit Nature as a source of knowledge instead of merely resources, we have so much more to gain. This is what Professor Idriss Aberkane is calling the '**switch** to the knowledge economy'. When you give or take a piece of knowledge it does not burn, it duplicates. And when you add two pieces of knowledge together, you always produce a little extra knowledge and sometimes you produce revolutionary extra knowledge. It's all about switching from 'using' the natural world to 'learning' from the natural world.

Instead of crying over the consequences of current climate change, high levels of pollution and destruction of natural habitats I suggest that while

to harvest (exp.) (in agriculture) to gather crops (plants, cereals etc.) to eat

to reapply (vb.) to adapt and use

underlying (adj.) basic, fundamental

thighbone (n.) bone of the upper leg

kingfisher (n.) a small brightly coloured bird with a long pointed bill living in tropical forests

forties (n.) the years between 1940 and 1949

seed (n.) small grain which is the unit of reproduction of a plant

blueprint (n.) a model, a plan (often used in architecture)

currently (adv.) now, at the moment

to abide by (vb.) to respect, to follow

growth (n.) expansion, development

to rely on (phrasal vb.) to depend on

finite (adj.) limited

organizational equation (exp.) model of organization

raw materials (exp.) basic materials which are then transformed by a production process

switch (n.) change from one situation to another

you are waiting for your termite-inspired air conditioning system, you go and observe the closest bird's nest or **beehive** just for a few minutes and **grab** a piece of knowledge!

And **PS**: Start paying attention to nature preservation initiatives. Nature still has so much to teach us.

beehive (n.) a place where bees live and produce their honey

grab (vb.) to seize, to take enthusiastically

PS. (post script, Latin acronym) used to mark an addition at the end of a piece of writing, an afterthought

*Tips!

Syllable stress can help us to understand spoken words.

Let's take the words 'install' and 'installation' as an example.

First count the syllables : 'in.stall has 2 syllables, 'in.stal.la.tion' has 4 syllables.

Syllable stress is when you say one of the syllables slightly louder and with more emphasis.

So in this example we say : in**stall** and install**la**tion.

Pronunciation - "ture" at the end of a word is pronounced "tch" as in "Tchad" as in the following words: na**ture**, tempera**ture**, architec**ture**, fu**ture**