

environmental education

Tenerife, 28th oct-2nd nov 2024

welcome





environmental education



1 NAME

2 NAME MEANING (if not, research!)

3 WHERE DO YOU COME FROM

4 SUBJECT AND LEVEL YOU TEACH

5 WHAT WOULD YOU LIKE TO VISIT
IN TENERIFE?

environmental education



WEWATER

environmental education


environmental education



Is about:

- + How to get students motivated and engaged with this topic
- + Resources that inspire us to integrate this transformative approach
- + Tips and games for in-class conversations and practises
- + One more step as **SUSTAINABILITY AGENTS**

... sharing the impact while **keeping it positive** and **future focused**



COLLABORATIVE EDUCATION

inspired in:

Systems thinking

Donella Meadows & Christian Walloth.

Essence of permaculture

David Holmgren, 2018.

Circular economy. The Ellen MacArthur foundation, 2010.

Sustainable Development Goals SDG - 2030. UN, 2015.

Designing regenerative cultures

Daniel C. Wahl, 2006.

Community Catalysts.

Resilient Earth, 2021.

Theater of the oppressed

Augusto Boal 1960 & Imagination.

Nonviolent Communication

Marshall Rosenberg, 1984.

environmental education



Summary:

WHY ENVIRONMENTAL EDUCATION?
INTRO TO SYSTEMS THINKING

HOW TO TURN ECO-ANXIETY INTO CLIMATE ACTIVISM?

When our actions lead us to hope.

FAST FASHION AND SLOW FASHION

DIY workshop to recycle textile waste, and explore sustainable alternatives.

Excursion to:

SAN BENITO COMMUNITY GARDEN

SCHOOL'S PERMACULTURAL GARDENS
UPCYCLING ORGANIC WASTE: NATURAL SOAP

A "close the loop" workshop to transform used oil into a natural soap

CREATIVE WORKSHOP FAIR
EVALUATION & DIPLOMA

environmental education
... **learning and acting** for **better future**



where do we come from?

where are we going?

where do we want to go?



where do we come from?

where are we going?

SCHOOL'S PRESENTATION

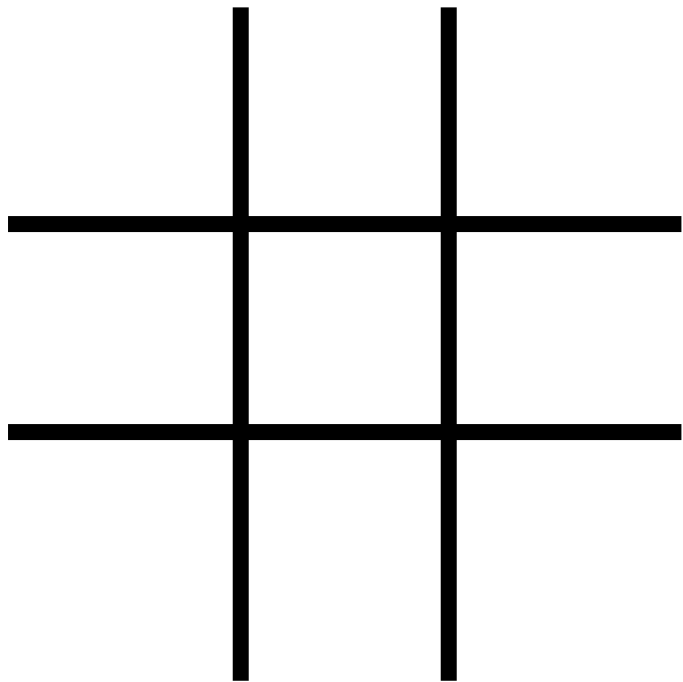
Share with the group your personal goal.

And, what about your school?

Do you think it is being more in the trend of TRADITIONAL or SUSTAINABLE BEHAVIOR?

Mention **challenges and solutions** related to sustainability currently happening in your school.

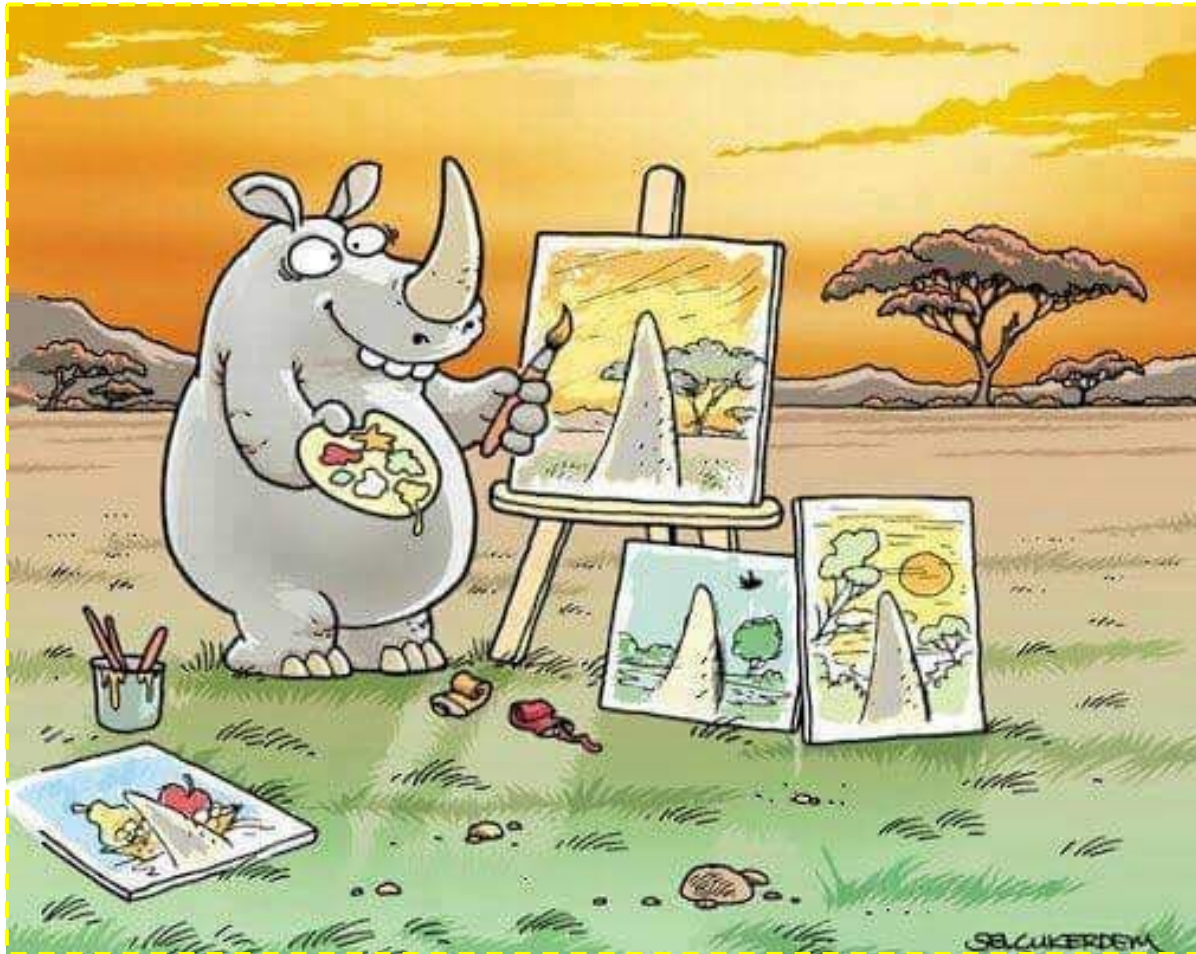




the model matters

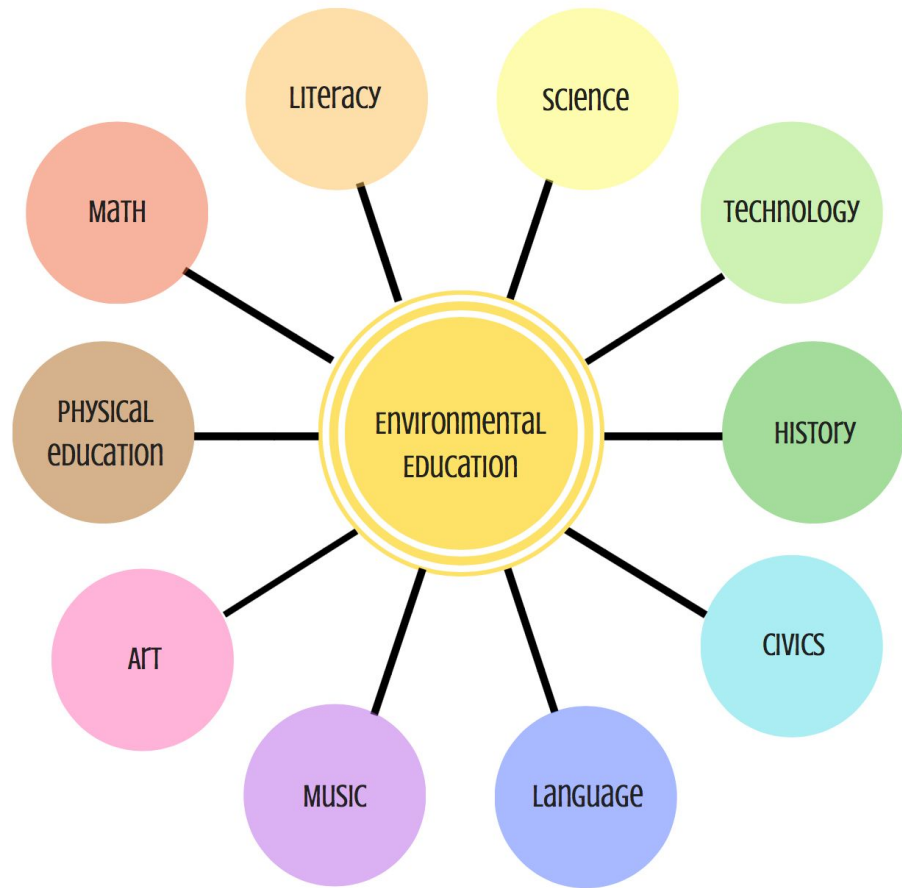
	X	X
	X	

the **model** matters



We don't see things
as they are, we see
things as we are

Anais Nin



what do we understand by **environmental education?**

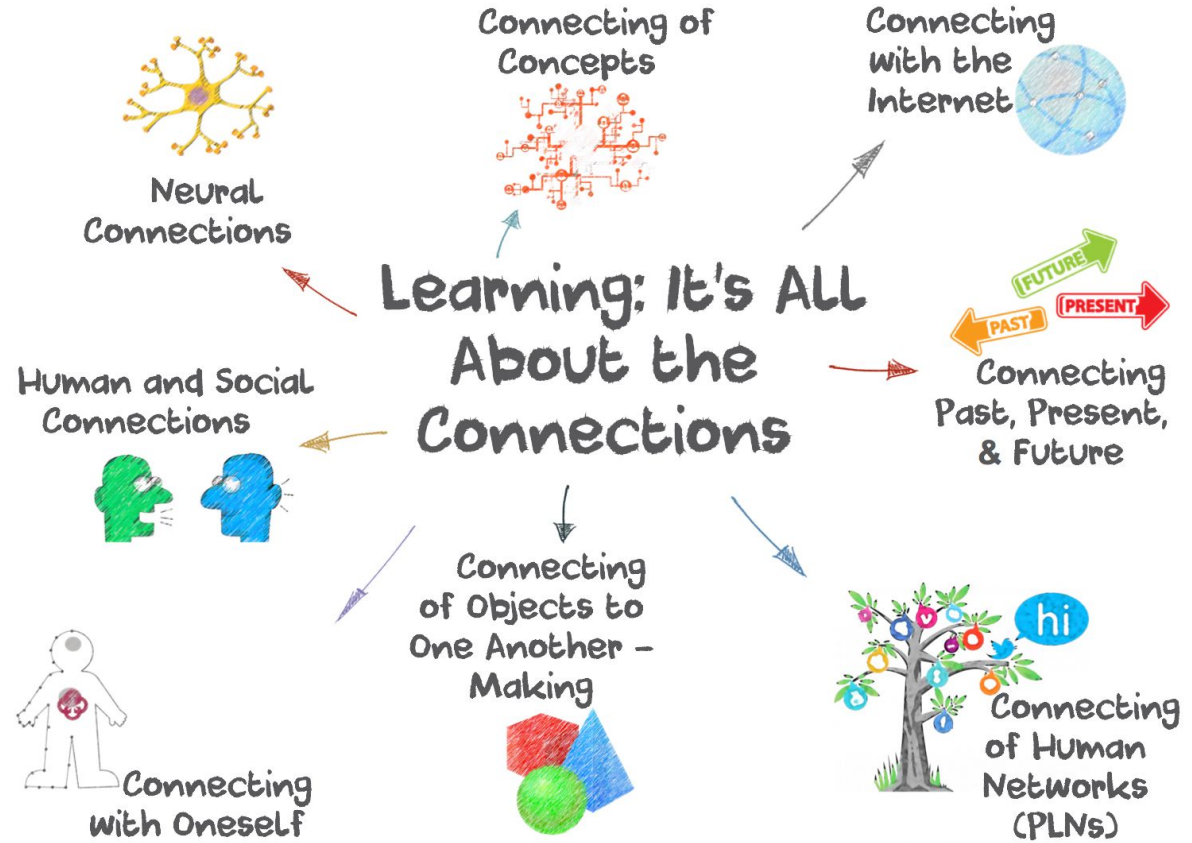
Environmental education is a process that allows individuals to explore environmental issues, **engage in problem solving**, and **take action to improve the environment**.

As a result, individuals develop a deeper understanding of them and have skills to make informed and **responsible decisions**.

environmental stewardship



how do we make this change of direction?

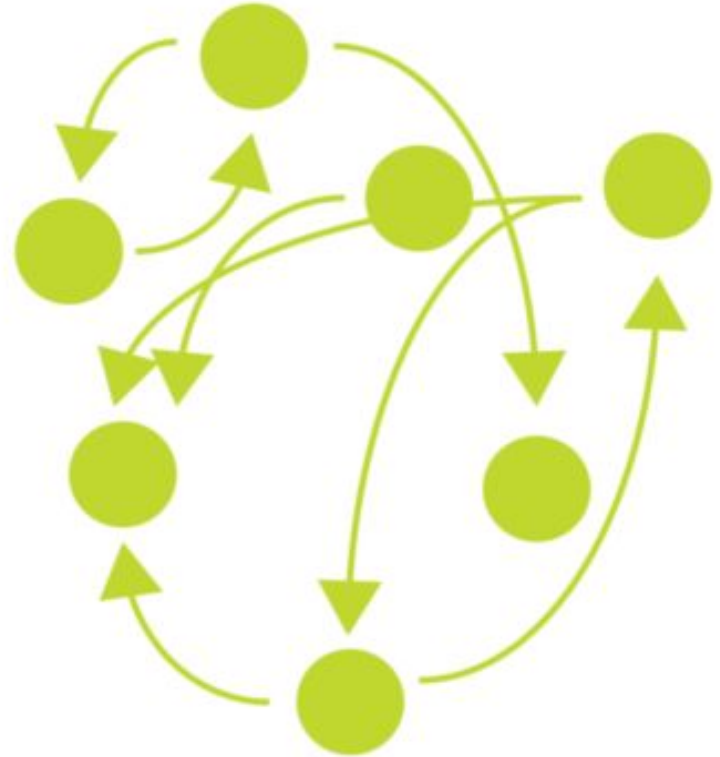


Traditional thinking



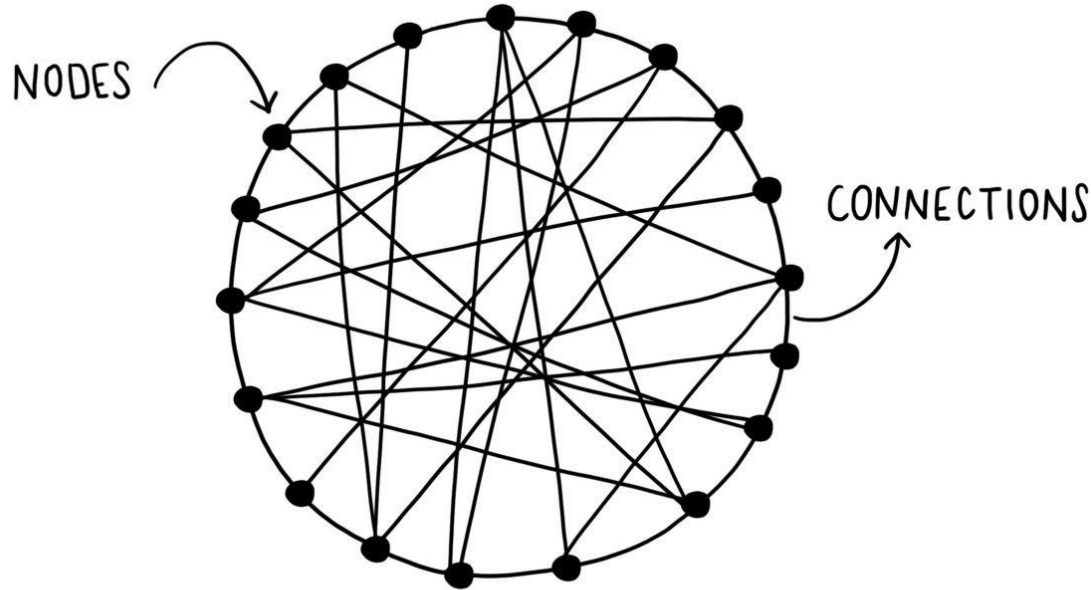
the **model** matters

Systems thinking



environmental stewardship

Systems Thinking



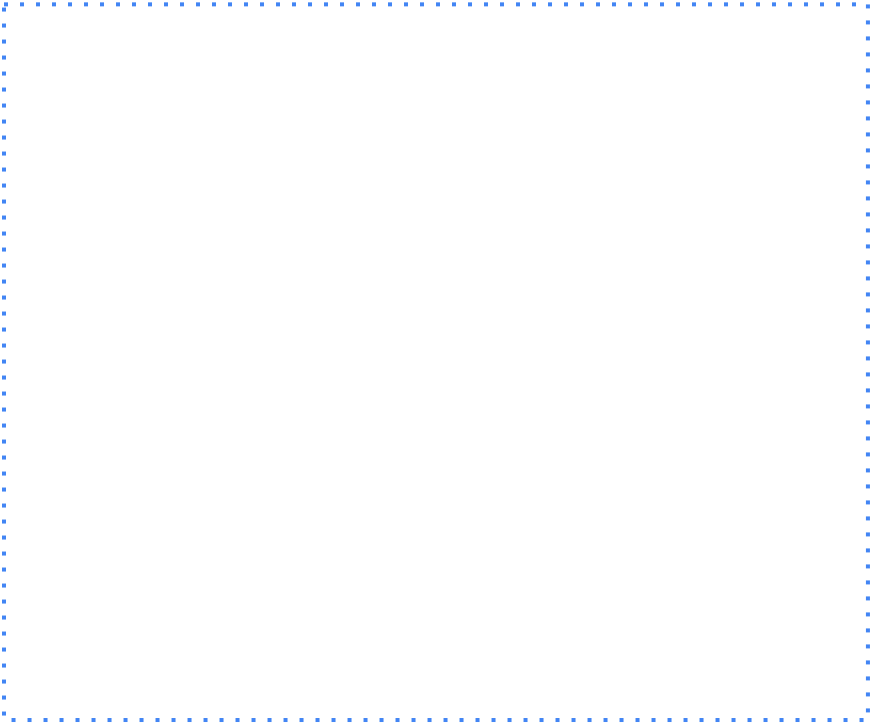
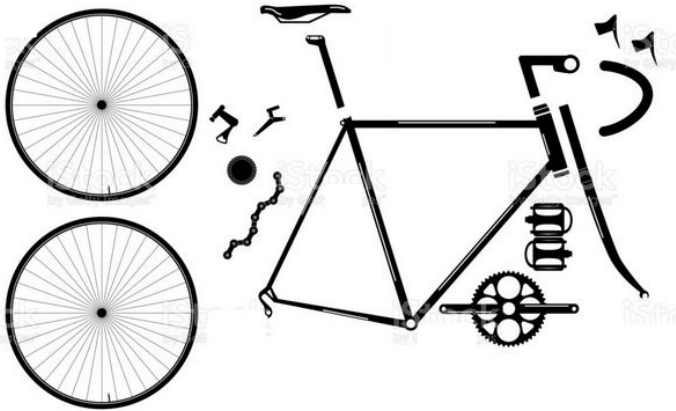
A system is a set of related components that work together in a particular environment to perform whatever functions are required to achieve the system's objective.

It is composed of:

- Elements
- Interconnections
- A collective purpose

D. Meadows

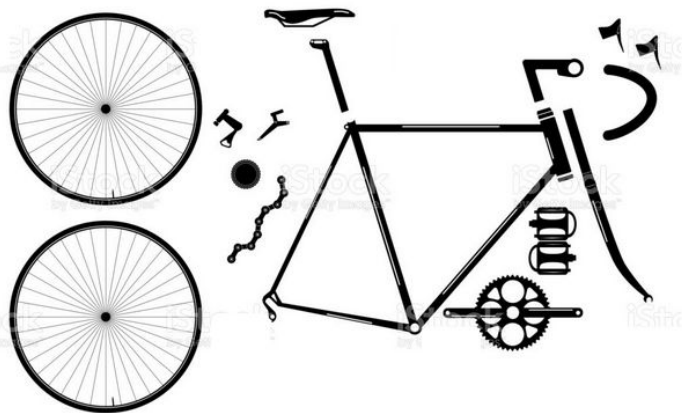
what's that?



now it is a bicycle

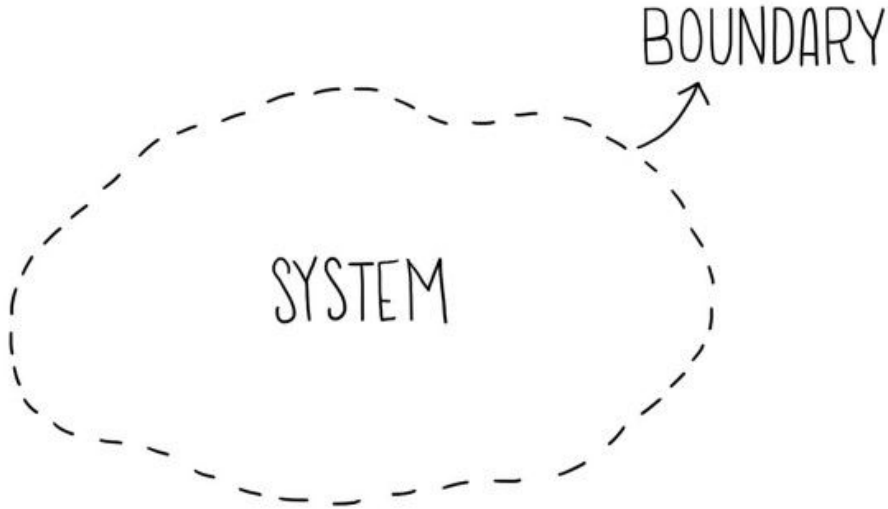
from a set to

a system



Systems Thinking

is everything a system?



There are no separate systems,
the world is a continuum.

Where to draw a boundary around
a system depends on the purpose
of the discussion.

D. Meadows

Systems Thinking



system's properties

Resilience - diversity - complexity

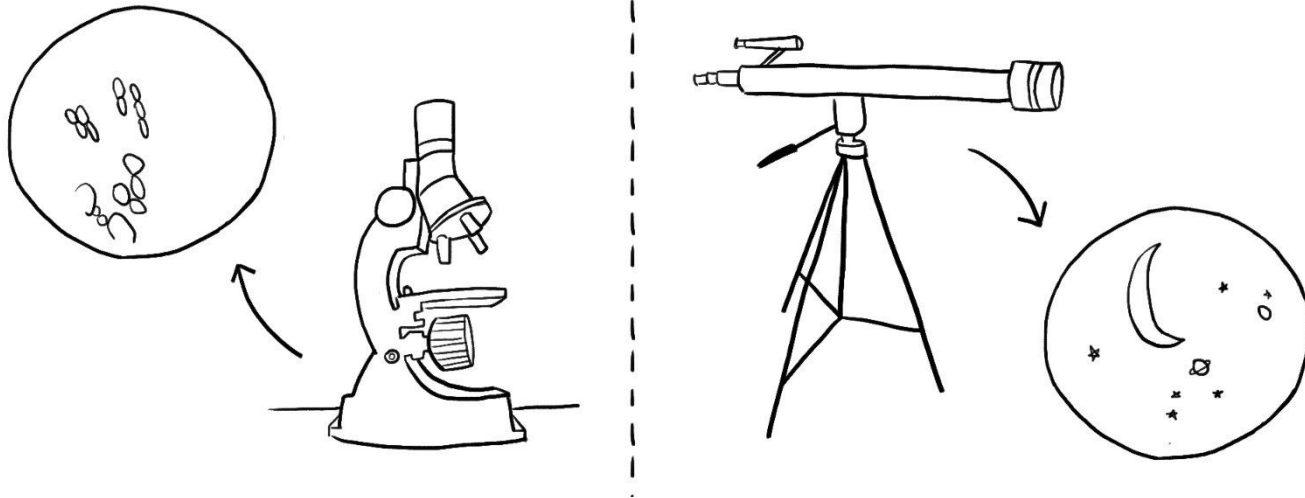
Self-organization - emergence

Hierarchy - order - nested systems

A system is more than the sum of its parts.

Systems Thinking

SYSTEMS THINKING SCALES



The **process of transformation** into a system **emerges** when interaction among elements changes the properties of the set.

D. Meadows

how this change of direction?



tools

of a system thinker

Nested systems

See the reality as a network
of relationships

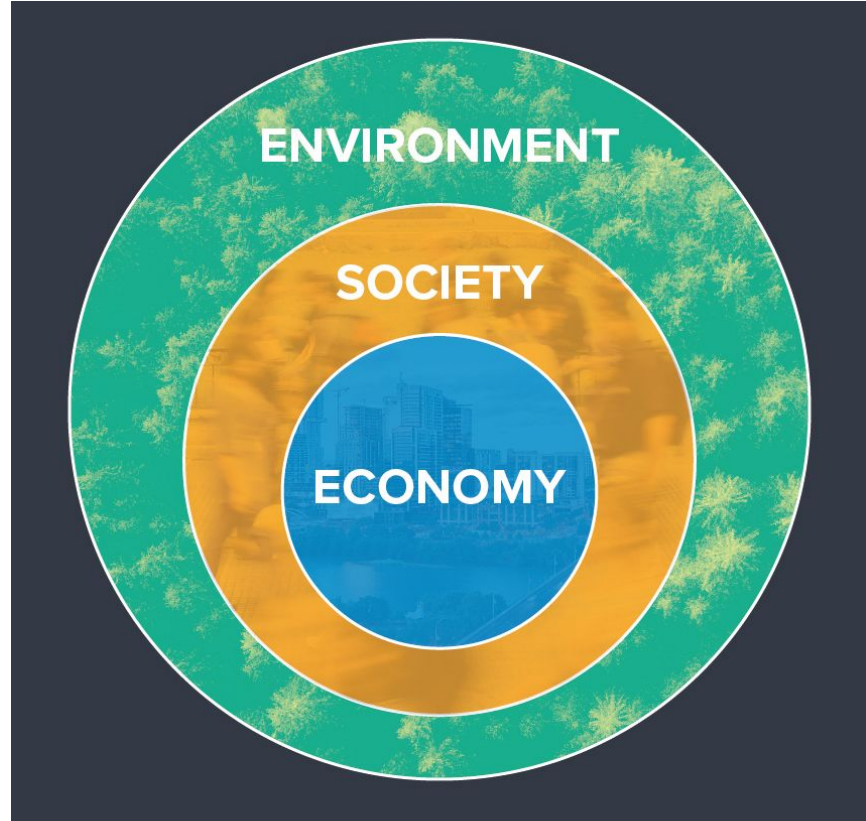
what is **sustainability** about?

Sustainability is about meeting the needs of current generations without negatively affecting the ability of future generations to meet their own needs.

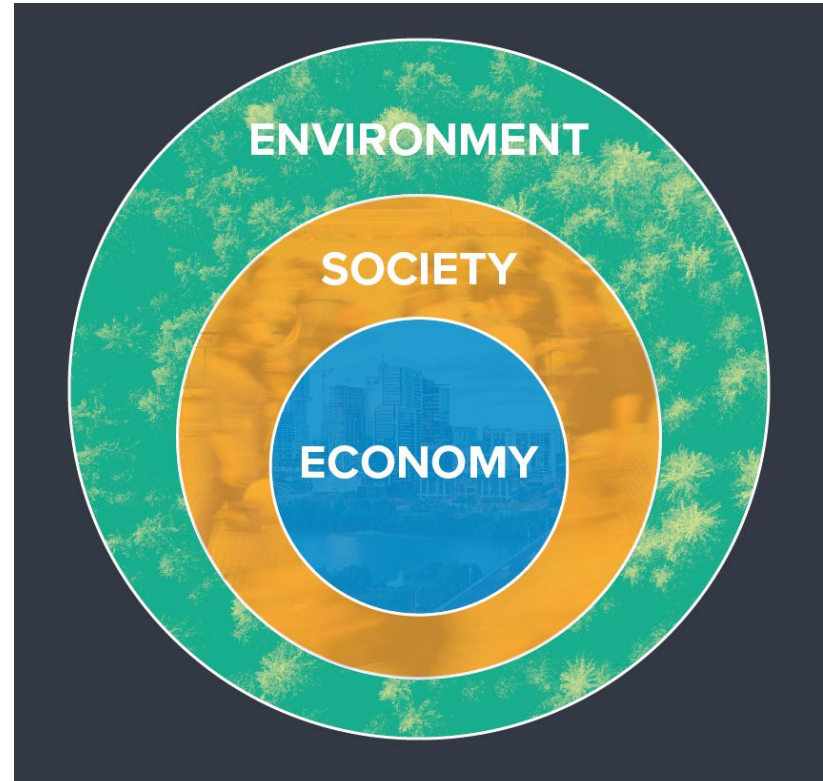


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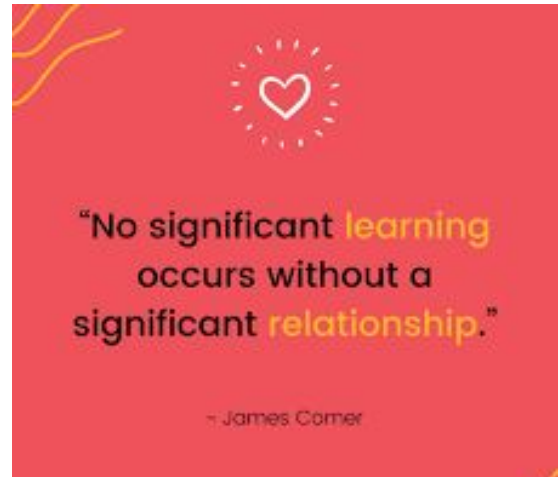
what is sustainability about?



environmental stewardship

how can we care of the learning processes?

This methodology is based on 3 principles:



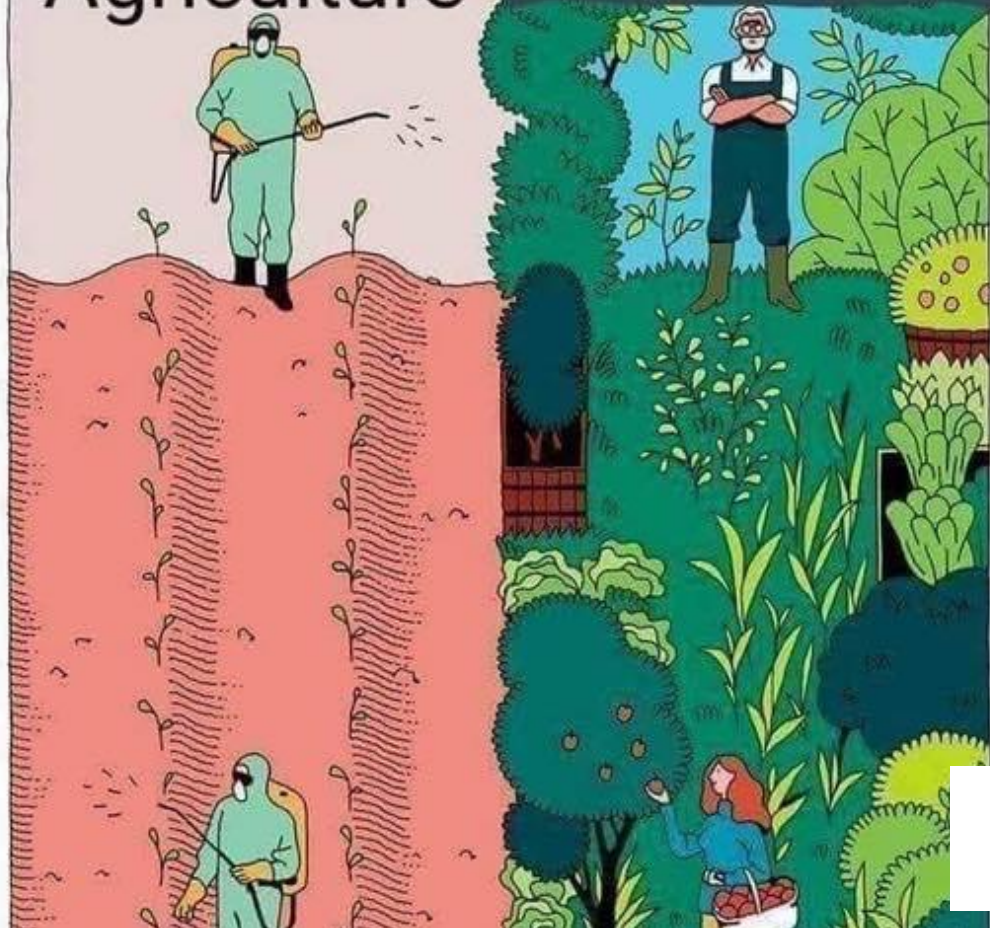
Head: educational resources
(materials, humans, animals, places, etc.)

Heart: significant learning
(learning is an unforgettable experience)

Hands: learn by doing (letting go so that learning is complete).

Agriculture

Permaculture



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environmental education
... **learning and acting** for **better future**

permaculture



Masanobu Fukuoka - One straw revolution (1975)

permaculture

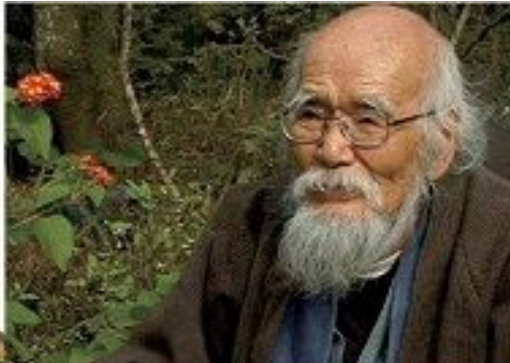
nendo dango
(seed clay balls)

No dig

**Do not use
fertilizers or
fertilizers**

**There are no
weeds**

No pruning



1. DESMOLVER
TUS GREENHOMES



2. ESPERAR
LOS SEMILLAS



3. ESPERAR LOS
PRIMOS LLUVIAS



4. CRECER CON
BROTAN...



...LOS ARBOLES



permaculture



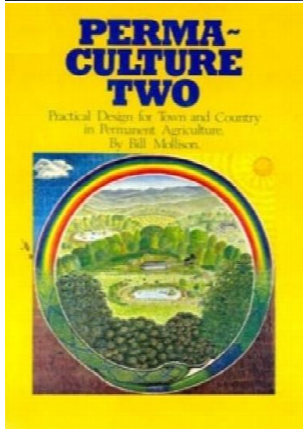
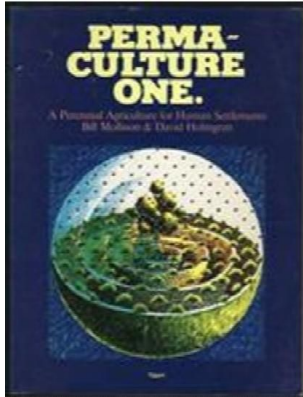
Loes. China

permaculture

Great Green Wall.
8,000 km
Mauritania,
Senegal, Sudan,
Eritrea and
Ethiopia.

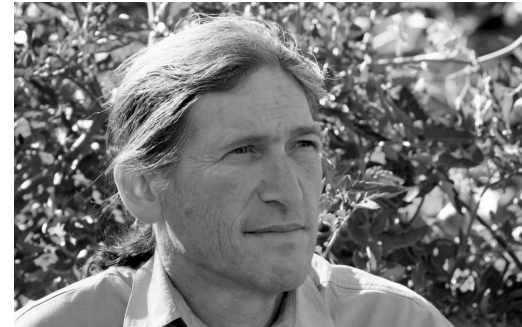
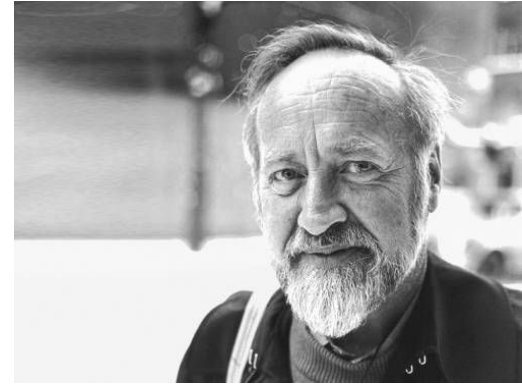


permaculture



**Humanity has not woven
the net of life. We are just
a thread of it. What we do
to the net we do to
ourselves. All things are
linked to each other.
Everything is connected.**

chief Seattle

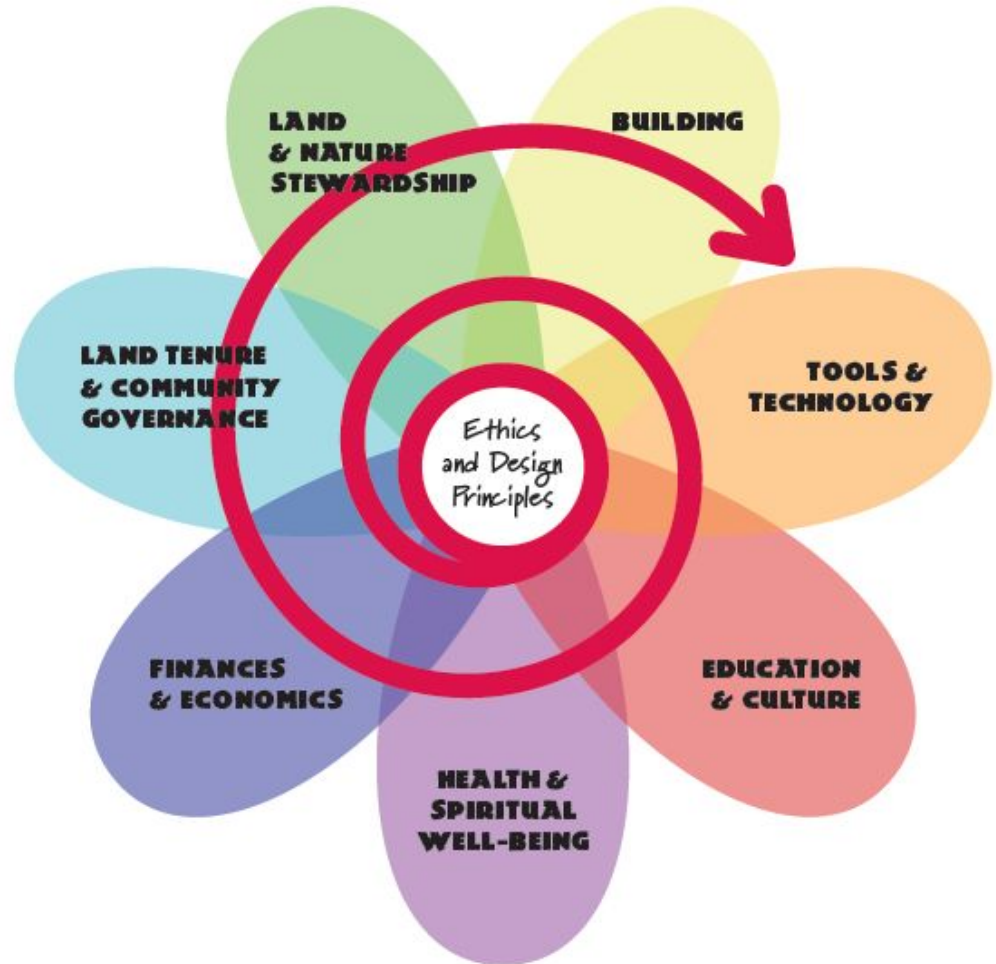


Founders:
Bill Mollison & David Holmgren

permaculture

PETALS

- Land & Nature stewardship
- Buildings
- Tools & Technology
- Education & Culture
- Health & Spiritual wellbeing
- Finance & Economics
- Land tenure & Community governance



permaculture

ETHICS

ethics

care of the Earth

leave in peace & regenerate

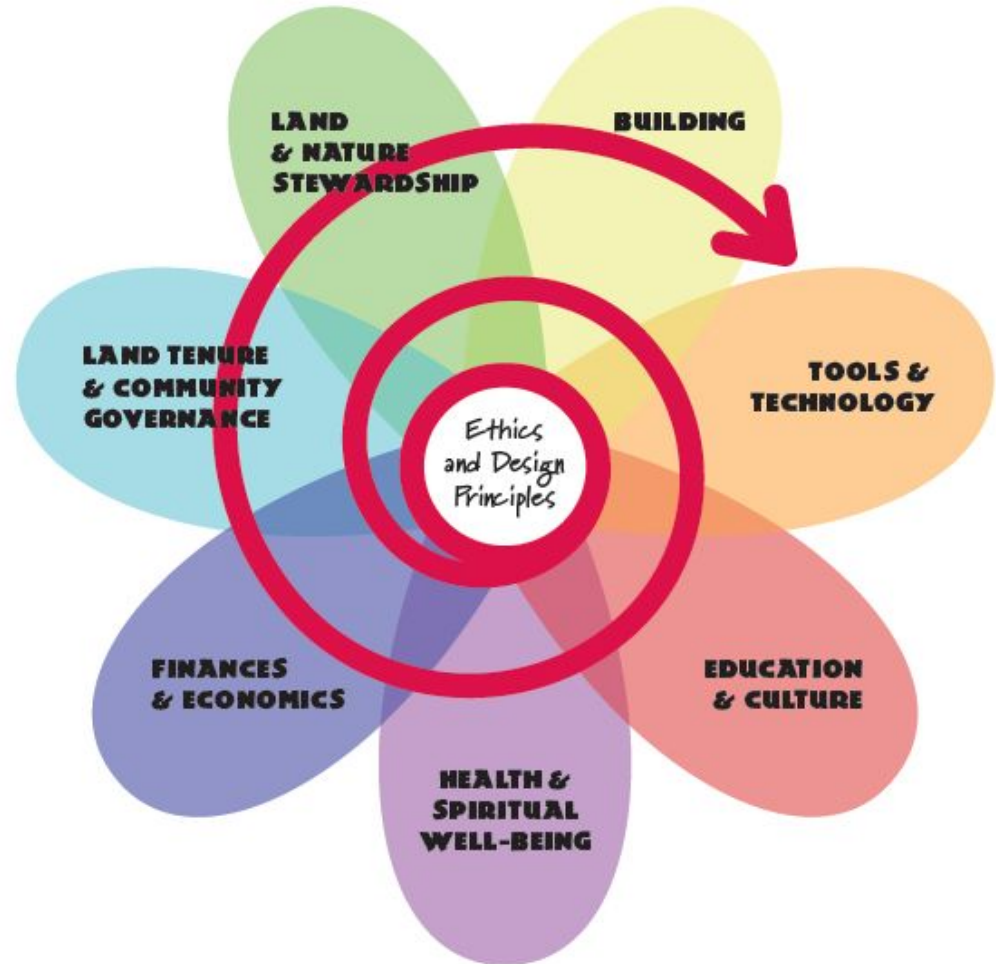
care of People

satisfy humanity needs

fair Shares

redistribution of surplus (E+P)

self-regulation of consumption a
population



permaculture

systems thinking design



designing outside
the box **and into**
nature

Observe

resources & limits

Understand

natural systems

cycles

patterns

Collaborate

fertility & diversity

permaculture

systems thinking design

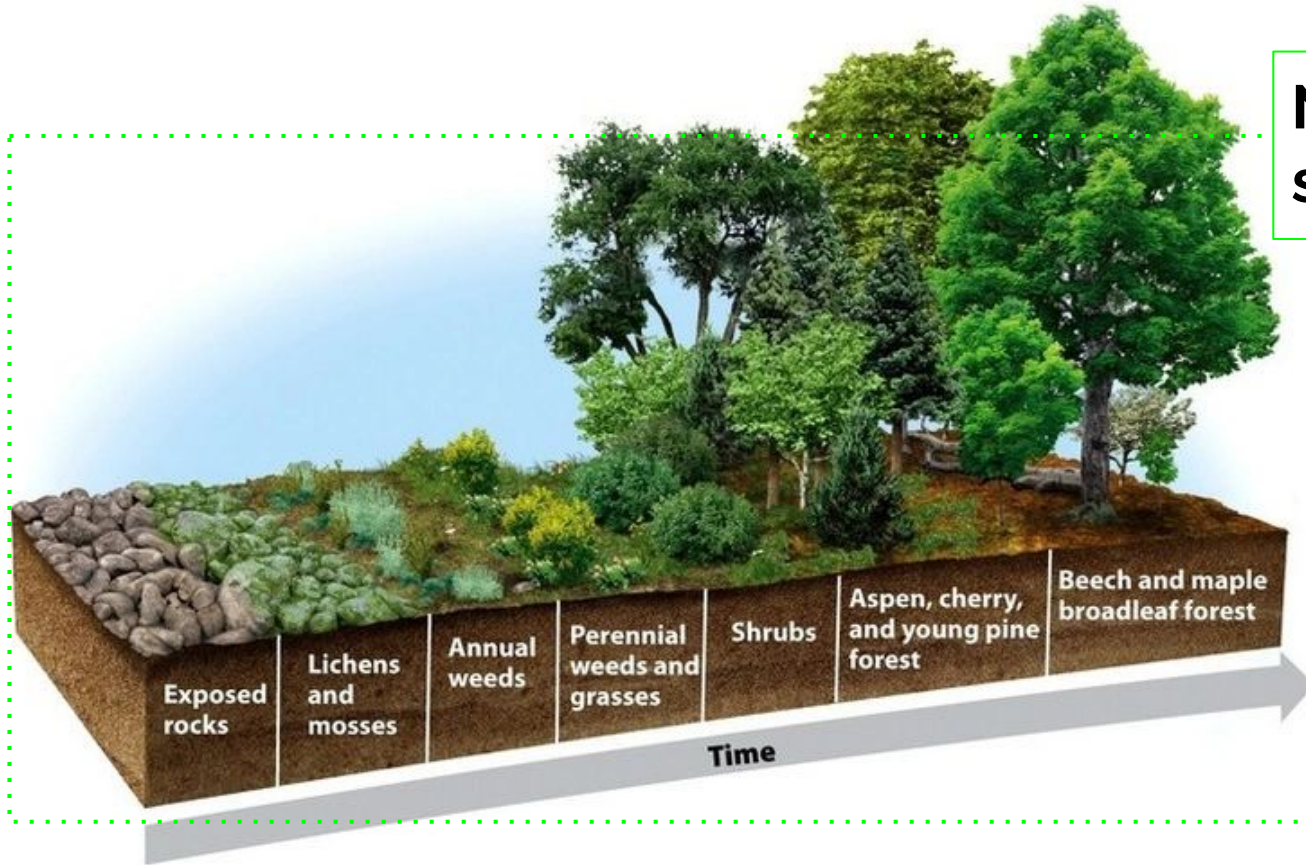
hierarchy - order

Natural
succession

Multifunction

Vision

Think about the 7
next generations



permaculture

systems thinking design

whole system design

zones &
sectors

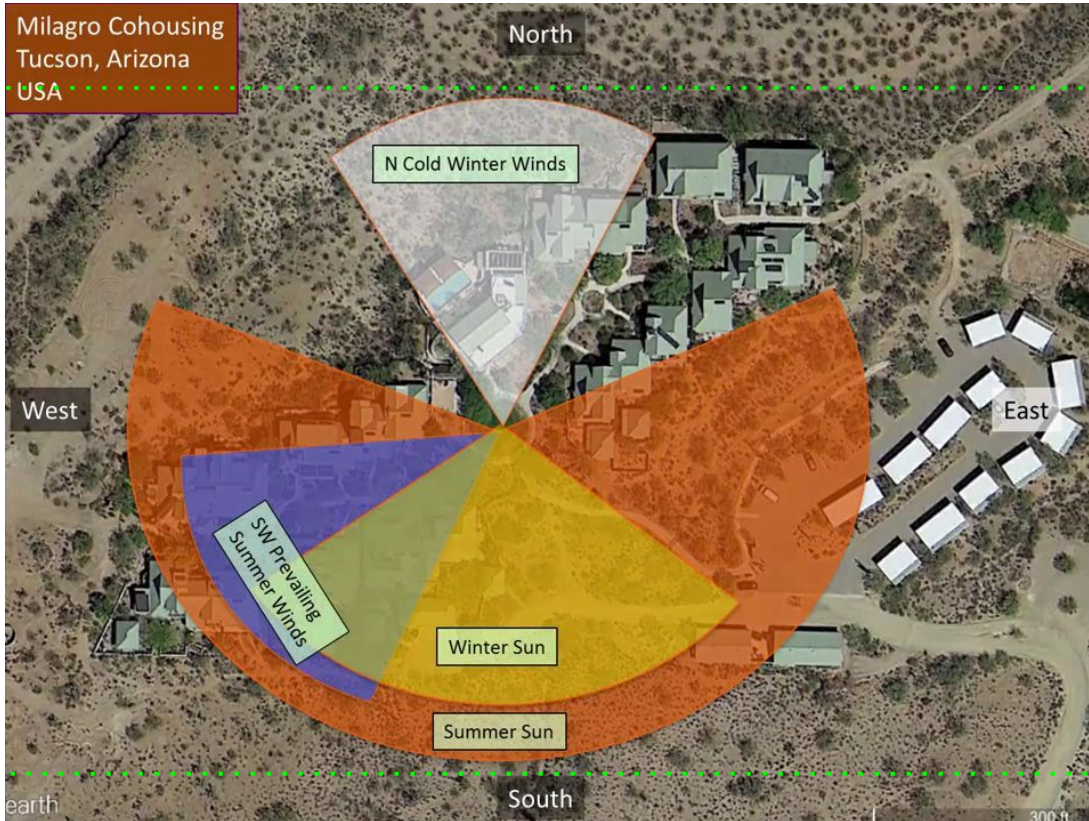
**Natural
patterns**

work with nature not
against it

flows patterns

Scale

from macro to micro



permaculture

systems thinking design

whole system design



zones & sectors

Boundaries
5 zones
energy efficiency

Nested systems
environment-society-
economy

permaculture

systems thinking design

positive feed-back

compost

No waste

everything serve to
the collective goal

Circularity

regenerative pattern



permaculture

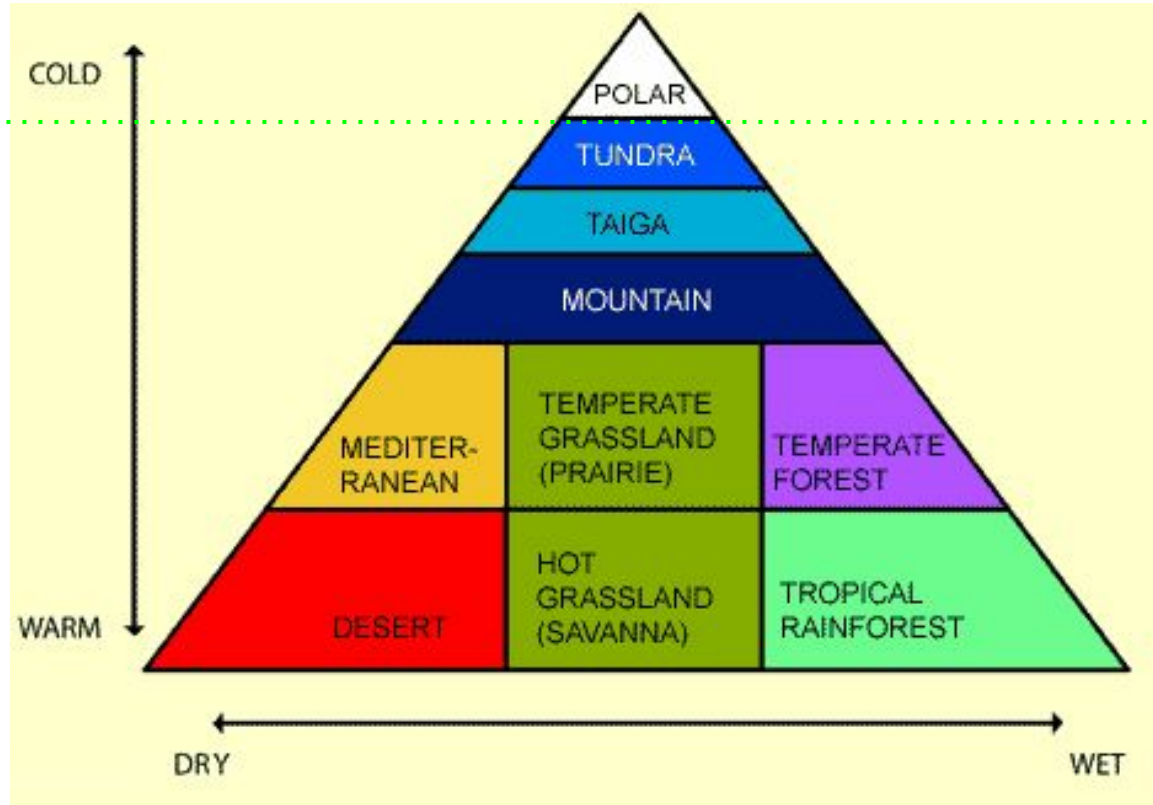
systems thinking design

positive feed-back

resilience

Self-organization
the system as more of the
sum of its parts

Biodiversity
adapted to ecosystem



permaculture



permaculture



Demetrio Fernández Vaquero

permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



permaculture



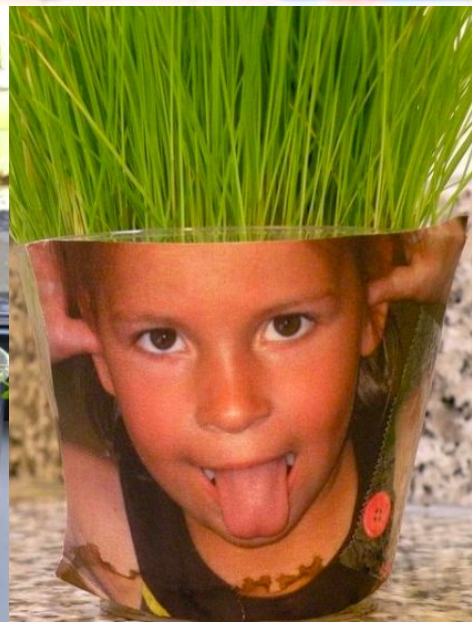
environmental stewardship

Class vertical gardening



environmental stewardship

Personalized plant pots

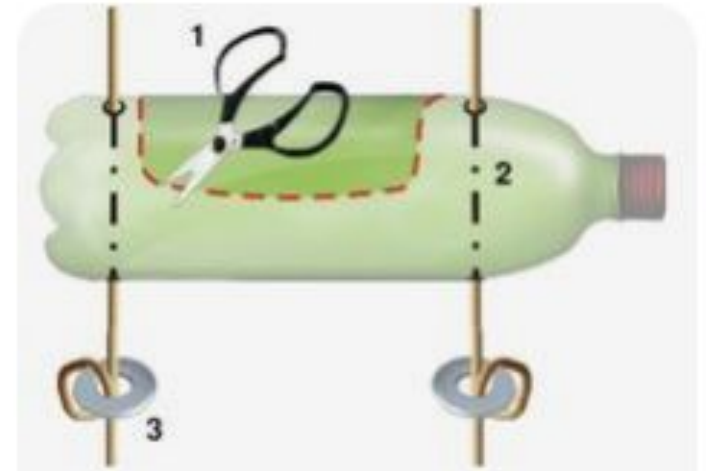


environmental stewardship

The classroom nursery



DIY
plastic bottle
planter



environmental stewardship

Bird feeders to support wild species



environmental stewardship

Novel pets
Silkworms



environmental stewardship

Novel pets

Growing Mushrooms



Recycle, reduce and reuse
applied to schools

NATURAL SOAP WORKSHOP



quérico
JABÓN
ALGAS ÁRBOL TÉ
TEA TREE ALGAE

Recycle, reduce and reuse applied to schools

Learn by doing about:

History: history of soap

Mathematics: measurements

Laboratory: precision, concentration, method, surprise

Chemistry: saponification reaction

Biology: properties of natural ingredients

Health: self-awareness and self-care and natural hygiene

Industry: caustic soda

Ecology: biodegradability

Economy: eco-friendly products

And more....



Recycle, reduce and reuse
applied to schools

creativity

marketing

packaging

selling

accounting



Recycle, reduce and reuse
applied to schools

NATURAL SOAP WORKSHOP

Used oil: 420 gr.

Caustic soda: 56 gr.

Water: 135 gr.



inspiring humans



Ellen MacArthur

The **circular economy** is an attractive alternative that seeks to **redefine what growth is**, with an emphasis on benefits for all of society. This implies **decoupling economic activity from the consumption of finite resources and eliminating waste from the system from design.**

Ellen MacArthur Foundation

OUR MISSION IS TO ACCELERATE THE TRANSITION TO A CIRCULAR ECONOMY

At the Ellen MacArthur Foundation, we develop and promote the idea of a circular economy. We work with, and inspire, business, academia, policymakers, and institutions to mobilise systems solutions at scale, globally.

[Learn more](#)

<https://www.ellenmacarthurfoundation.org/>

TED Talk The surprising thing I learned sailing solo around the world | Dame Ellen MacArthur:

<https://youtu.be/oolxHVXgLbc?si=4zANQJVoXnmTIfBV>

inspiring humans



Daniel Schmachtenberger

Motivated by the belief that advancing **collective intelligence and capacity is foundational to the integrity of any civilization**, and necessary to address the unique risks we currently face given **the intersection of globalization and exponential technology**.

The Consilience Project is developing a body of social theory and analysis that explains and seeks solutions to the unique challenges we face today.

Consilience (n):

"In science and history, consilience is the principle that evidence from independent, unrelated sources can 'converge' on strong conclusions.

That is, when multiple sources of evidence are in agreement, the conclusion can be very strong even when none of the individual sources of evidence is significantly so on its own."

<https://consilienceproject.org/about/>

<https://civilizationemerging.com/media/>

EMERGENCE Talk

<https://www.youtube.com/watch?v=eh7qvXfGQho>

inspiring humans



Ernst Gotsch

Ernst Gotsch is a Swiss farmer and researcher who works mainly in Brazil. It has originated a **system of climate and biodiversity friendly sustainable agriculture techniques known as syntropic agriculture or dynamic agroforestry.**

Syntropic agriculture



<https://www.youtube.com/watch?v=gSPNRu4ZPvE>

ECOLOGICAL FOOTPRINT

www.footprintcalculator.org

do you know your ecological footprint?

Global Footprint Network®

In partnership with: Life Is On | Schneider Electric

Earth Overshoot Day 2021 is July 29

WHAT IS YOUR

Ecological Footprint?

How many planets do we need if everybody lives like you?

When is your personal Overshoot Day?

TAKE THE FIRST STEP

FR

inspiring resources for sustainable + regenerative education

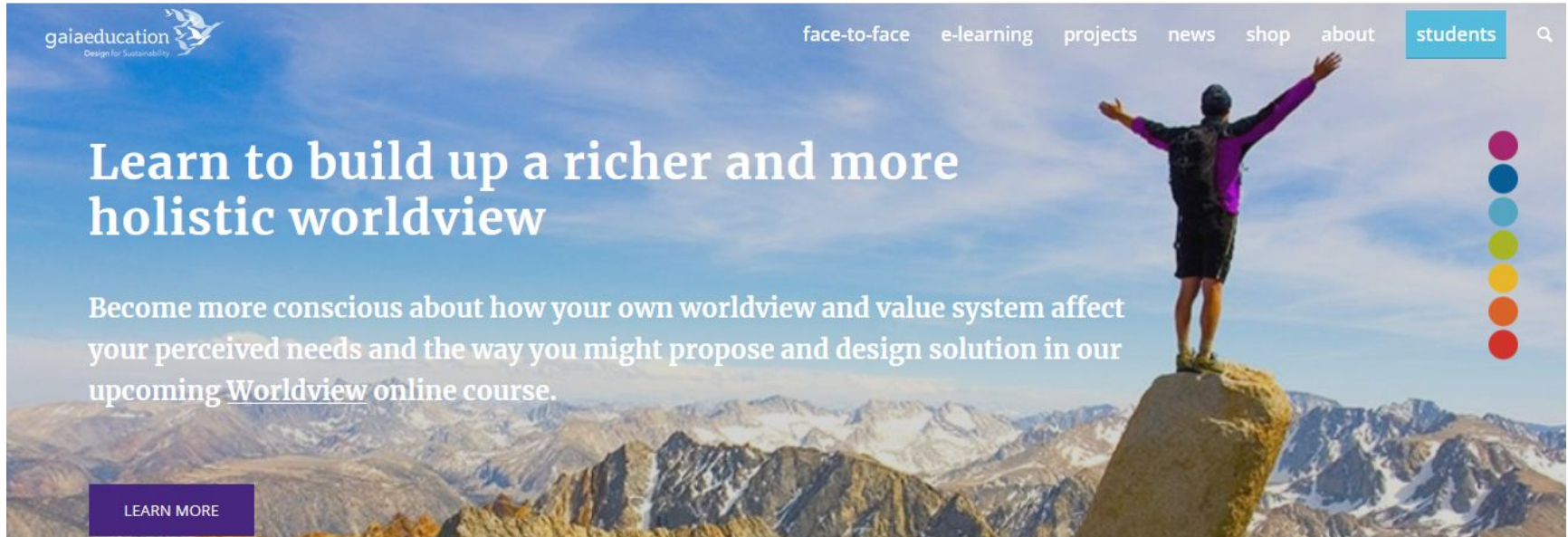
[Home](#)[For Educators](#)[For Students](#)[Take Action](#)[Contact Us](#)

WELCOME TO THE CIRCULAR CLASSROOM!

An interactive educational toolkit for upper secondary high school educators and students to integrate circular thinking into the classroom.

<https://circularclassroom.com/>

inspiring resources for sustainable + regenerative education

The image is a screenshot of the Gaiia Education website homepage. The background is a photograph of a hiker standing on a large rock peak, arms raised in triumph, overlooking a vast mountain range under a blue sky. The website's navigation bar is at the top, with links for 'face-to-face', 'e-learning', 'projects', 'news', 'shop', 'about', and 'students' (which is highlighted in a teal box). A search icon is also present. The Gaiia Education logo, featuring a stylized bird, is in the top left corner. The main headline reads 'Learn to build up a richer and more holistic worldview'. Below it, a sub-headline says 'Become more conscious about how your own worldview and value system affect your perceived needs and the way you might propose and design solution in our upcoming Worldview online course.' A purple 'LEARN MORE' button is located at the bottom left of the main content area. On the right side of the page, there is a vertical column of six colored circles: purple, teal, light blue, lime green, yellow, and red.

gaiaeducation
Design for Sustainability

face-to-face e-learning projects news shop about students

Learn to build up a richer and more holistic worldview

Become more conscious about how your own worldview and value system affect your perceived needs and the way you might propose and design solution in our upcoming Worldview online course.

LEARN MORE

<https://www.gaiiaeducation.org/>

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The
Schumacher Institute



An independent think tank for environmental, social and economic issues.



<https://www.schumacherinstitute.org.uk/>

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ABOUT PHILOSOPHY PROGRAMS COMMUNITIES RESOURCES DONATE LOGIN



HELLO. WE ARE
The Regenerates.

<https://regenerat.es/>

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[Who we are](#) [How we work](#) [Education](#) [Projects](#) [Resources](#) [Books](#) [Blog](#) [🔍](#)

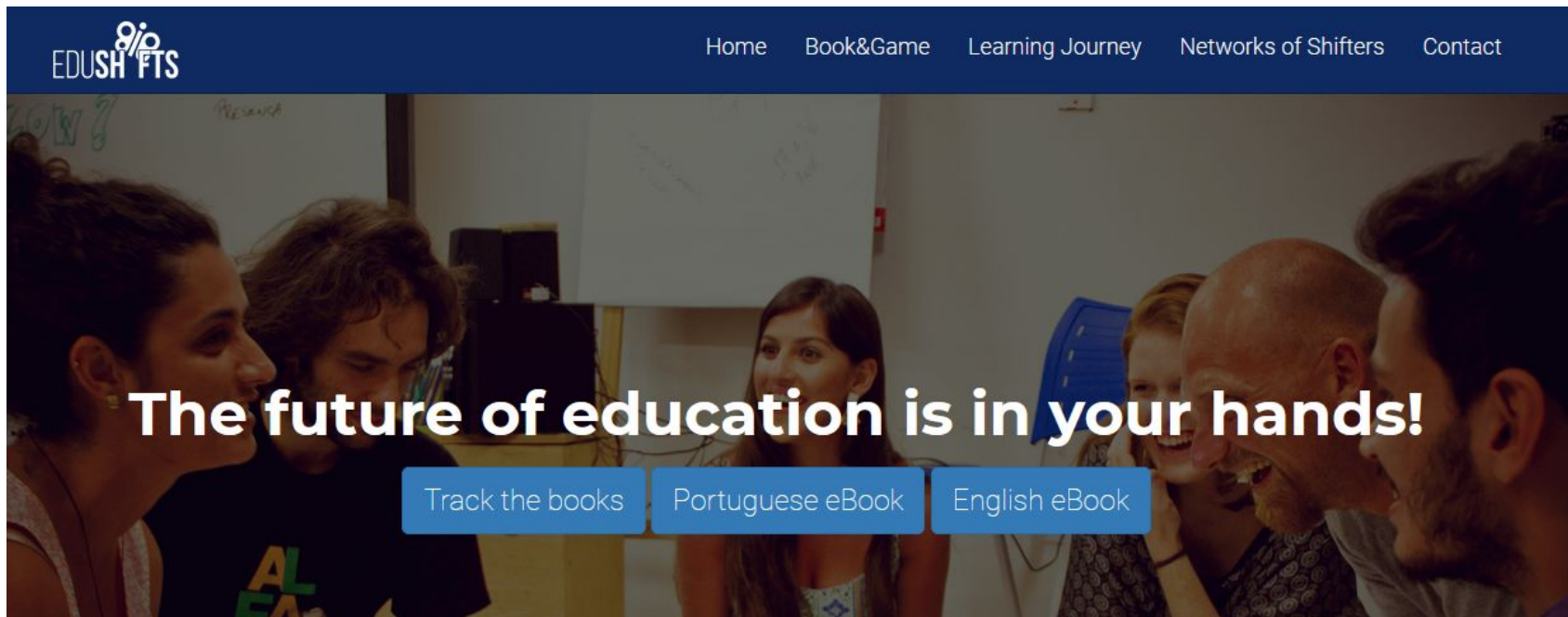
REGENERATIVE DEVELOPMENT

Transforming the way humans
inhabit the earth.

[Watch the video series](#)

<https://regenesishgroup.com/>

inspiring resources for sustainable + regenerative education

The image shows a screenshot of the EDUSHIFTS website. At the top, there is a dark blue navigation bar with the EDUSHIFTS logo on the left and five menu items: Home, Book&Game, Learning Journey, Networks of Shifters, and Contact. Below the navigation bar is a large photograph of a diverse group of people in a meeting or classroom setting, looking at something off-camera. Overlaid on this photograph is the text 'The future of education is in your hands!' in a large, white, sans-serif font. Below this text are three light blue buttons with white text: 'Track the books', 'Portuguese eBook', and 'English eBook'.

EDUSHIFTS

Home Book&Game Learning Journey Networks of Shifters Contact

The future of education is in your hands!

Track the books Portuguese eBook English eBook

<https://www.edushifts.world/>

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Search...

Login / Register

Donate

Get involved

About the Movement

Transition Near me

Stories

Do Transition

News and blog

Schools in Transition



<https://transitionnetwork.org/do-transition/transition-in-action/schools-in-transition/>

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Getting started with
Sustainability in Schools

Resources Portal

Home

Steps

Case Studies

Resources Portal

Support

In the Curriculum

About Us

Steps

- > In the Classroom
- > In the School
- > In the Community
- > Connecting to Networks

'Every school is located in an ecosystem; a ready-made, complex world ripe for discovery, exploration,

Steps to sustainability education

There are many steps to sustainability education. Here are some resources to help you, whichever step you are at.



In the classroom

In the classroom, on a day-to-day basis, sustainability enriches and strengthens students' learning. This step is designed for teachers who are seeking to bring

<https://sustainabilityinschools.edu.au/steps>

inspiring resources for sustainable + regenerative education

The image shows a screenshot of a Padlet board. At the top, the title is "Ways to normalise environmental issues in our classes" with a subtitle "Please contribute your ideas!". The board is organized into five columns, each with a header and a corresponding note. The first column has a header "Background reading & watching" and a note with a link to an article about normalising environmentalism in ELT. The other four columns have headers "Ways of normalising through lesson content", "Ways of normalising through class time and the classroom", "Ways of normalising throughout the school", and "Ways of normalising outside of school". Each of these four columns has a note asking for ideas that give lessons a twist, add an environmentalist approach, push action and activism, or encourage action that encourages students' and co-workers' lives away from the school. The board also shows user avatars, timestamps, and comment counts for each note.

Daniel + 7 · 9h

Ways to normalise environmental issues in our classes

Please contribute your ideas!

- Background reading & watching**
 - Daniel 16d
Article about normalising environmentalism in ELT
How do we integrate the time into our day-to-day words, how do we normalise in ELT?
Give your lessons a sustainability twist! ... 10 ways to integrate the key issue of our...
- Ways of normalising through lesson content**
 - Daniel 16d
Note
Please post ideas here that give lessons a twist; don't suggest whole lesson ideas.
1 comentario
ddanimundy 15d
- Ways of normalising through class time and the classroom**
 - Daniel 16d
Note
Please post ideas here that add an environmentalist approach to the classroom, class routines, etc.
4 comments
- Ways of normalising throughout the school**
 - Daniel 16d
Note
Please post ideas here that push action and activism out to the level of the institution.
Añadir comentario
- Ways of normalising outside of school**
 - Daniel 16d
Note
Please post ideas here that encourage action our students' and co-workers' lives away from the school.
Añadir comentario

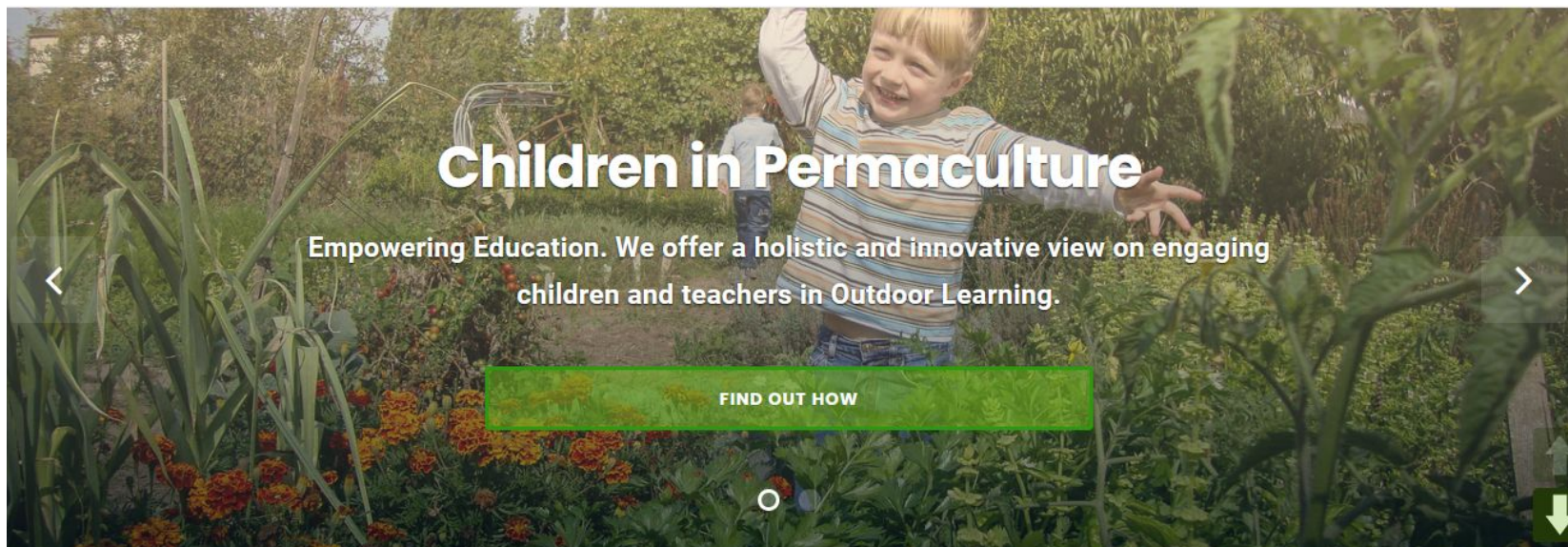
<https://padlet.com/danieljamesbarber72/vvoow2763mc1ba6q>

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<https://www.youtube.com/watch?v=ogOlaGBNW1k&t=6s>

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A woman with long dark hair, wearing a black top, stands in a lush garden filled with tall green plants and orange flowers. The background is a dense wall of green foliage.

Heather Jo Flores

Writing Challenges

Permaculture Courses

Food Not Lawns (free book!)

Join my community

NEW Podcast!

Find me on Youtube

<https://www.heatherjoflores.com/>

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[Blog](#)

[Community Forum](#)

The Work That Reconnects Network

The Work that Reconnects helps people discover and experience their innate connections with each other and the self-healing powers of the web of life, transforming despair and overwhelm into inspired, collaborative action.

~ Joanna Macy

<https://workthatreconnects.org/>

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SYSTEMS THINKING & REGENERATION MOVEMENT

The work that reconnect <https://workthatreconnects.org/>

Regenesis movement <https://regenisigroup.com/>

Climate and systems thinking <http://www.lindaboothsweeney.net/>

CIRCULAR ECONOMY

Rethinking progress <https://www.youtube.com/watch?v=zCRKvDyyHml&t=9s>

Circular design guide <https://www.circulardesignguide.com/>

INSPIRING SCHOOLS, TEACHERS, DESIGNERS AND TEACHINGS

Findhorn foundation <https://www.findhorn.org/>

Brockwood Park School <https://brockwood.org.uk/>

The Unschool of disruptive design <https://www.unschools.co/>

Leyla Acaroglu <https://www.leylaacaroglu.com/>

Youth initiative program <https://yip.se/>

School circles <https://schoolcirclesfilm.com/>

Dra. Alice Mendus [//">https://independent.academia.edu/DrAlysMendus //](https://independent.academia.edu/DrAlysMendus)

<https://alysmendus.wordpress.com/about/>



thank you!

OUR COMMUNITIES

environmental education
... **learning and acting** for **better future**