



Circle U.
European University Alliance



Round table: Educational resources and climate change

Co-organised by IARTEM and Circle U [Knowledge Hub on Climate](#)

Université Paris Cité



Co-funded by the Erasmus+ and Horizon Europe programmes of the European Union.

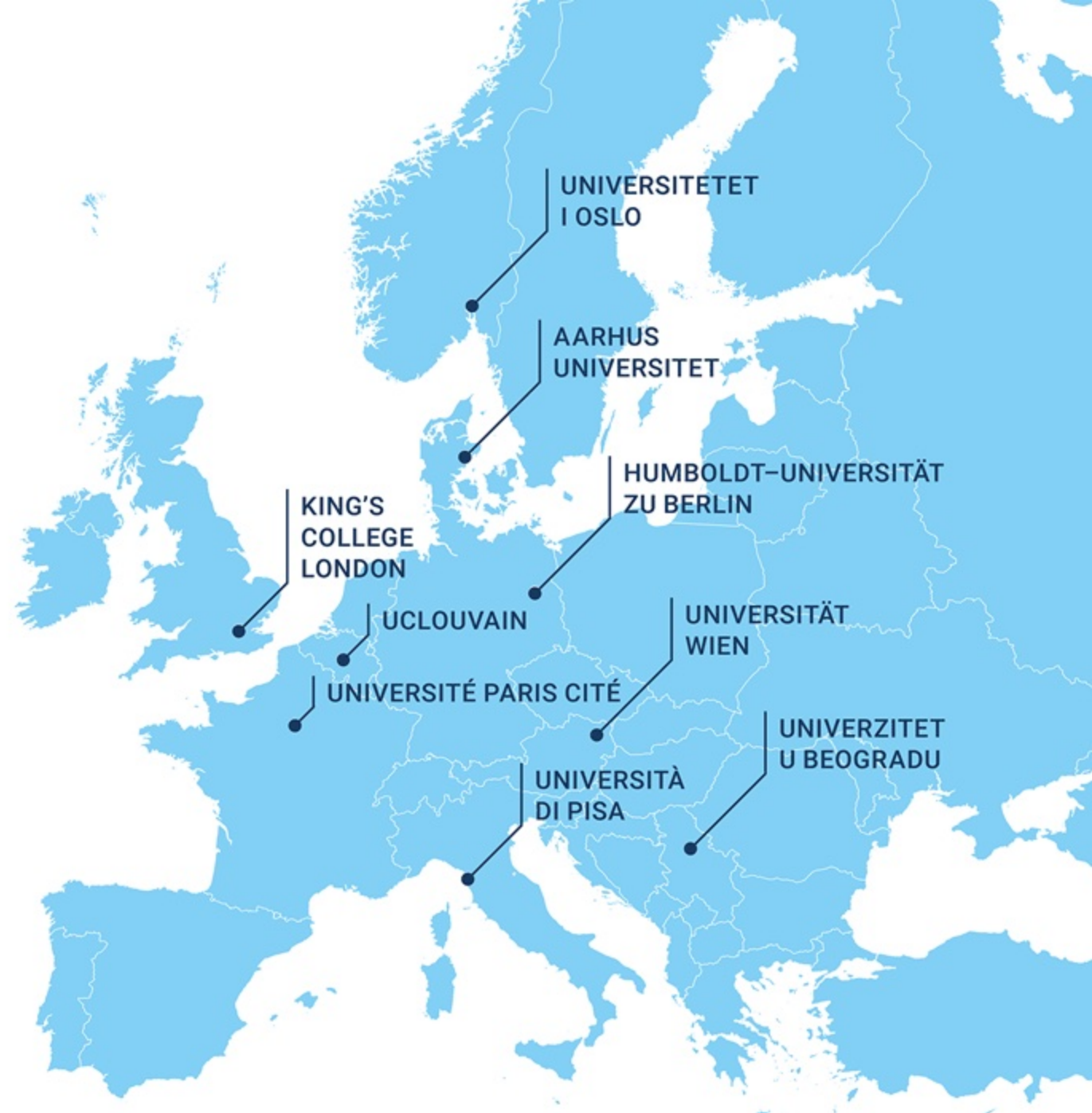


Circle U.
European University Alliance

About Circle U.

Knowledge Hubs:

- **Climate**
- Global Health
- Democracy





Panelists

**Wendy
Morel**

**Yoko
Mochizuki**

**Marcel
Robischon**

**Marnik
Vanclooster**

Moderator

**Xiaofeng
Guo**

**Yacine
Boufkhad**



UCLouvain



Programme

- **Yacine Boufkhad**, Paris Cité University. Sensors networks for energy monitoring in educational buildings
- **Marnik Vanclooster**, UC Louvain. Water, agriculture and food security
- **Yoko Mochizuki**, Paris Cité University. Interrogating educational responses to climate crisis: Reimagining climate change education in the Anthropocene
- **Marcel Robischon**, Humboldt Universität Berlin, Agroecology place- and object-based approaches and narrative forms in education for sustainable development
- **Wendy Morel**, Humboldt Universität Berlin, Solution oriented teaching and engagement - The Handprint Initiative

Debates



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The Integration of Climate Change Issues into Educational Activities

**Talking about Climate Change without talking about Climate
Change**

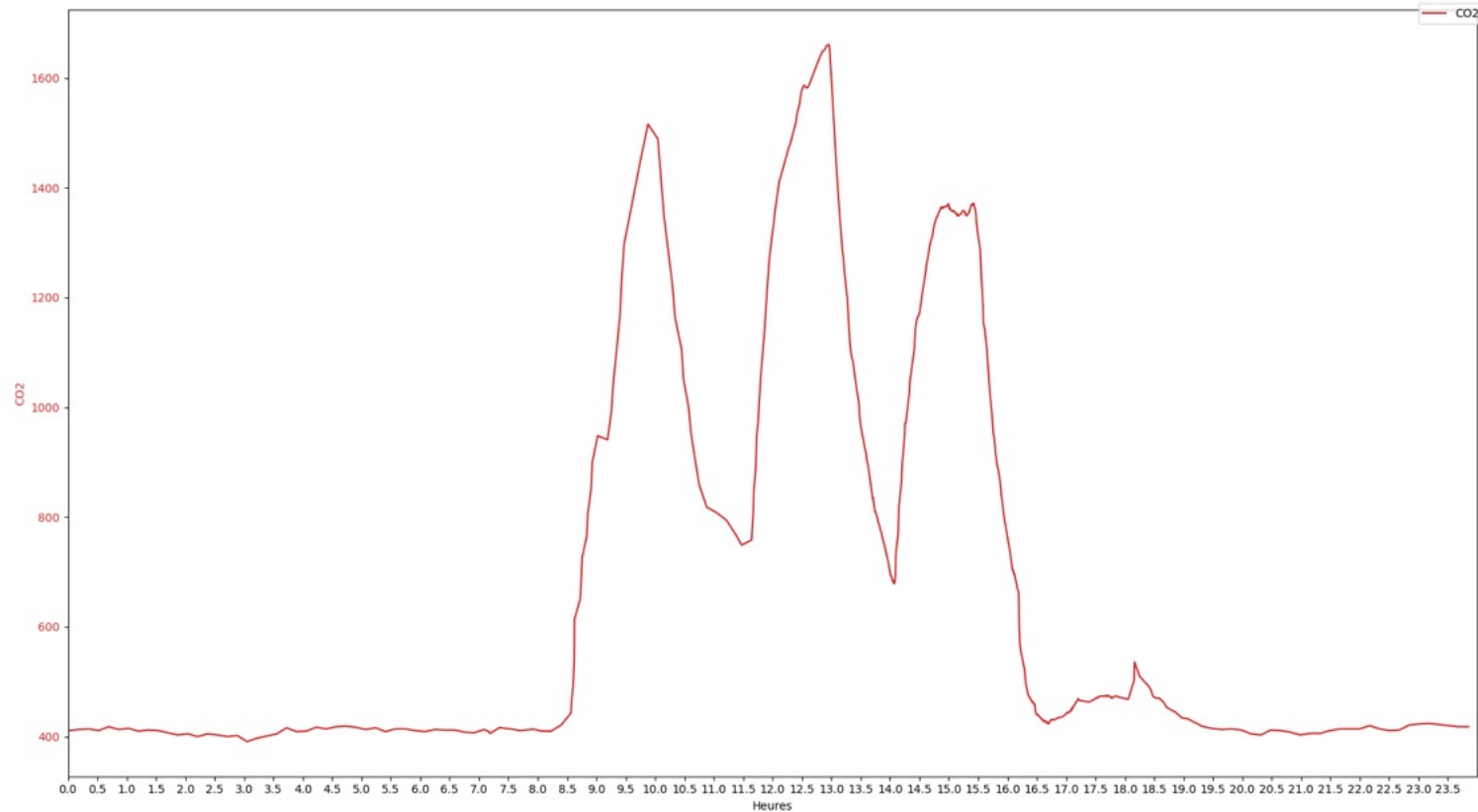
Yacine Boufkhad

Sensing, Measuring, Collecting data



Fig.1 : L'architecture du réseau de capteurs multi-physiques qui seront déployés sur le bâtiment IUT Pajol

Measuring Carbon Dioxide concentration in everyday life



An example...

- To verify a CO_2 sensor. Is the value it gives outdoor correct? What is a good value? (few students know this)
- We look it up on the internet... We find a value, but be careful, we need to check the date... Was it the current value or the value ten years ago? Sixty years ago? 60 years ago the concentration was 25% lower.

The increase in greenhouse gases in the atmosphere is a concrete measurable reality.

A concrete reality...

- In a world where information flows abundantly, too much information tends to kill information. Climate change tends to become a trivial topic.
- Add to this the conspiracy theories developing around the subject.
- Often advocates of climate change present things in a moralistic way.
- Being able to concretely measure what we are talking about, even just a small part of it, allows us to be already in action rather than passively receiving moral lessons.

Facing climate and societal change:

Concepts for designing, sharing, and using educational resources in traditional and new subjects in compulsory and higher education

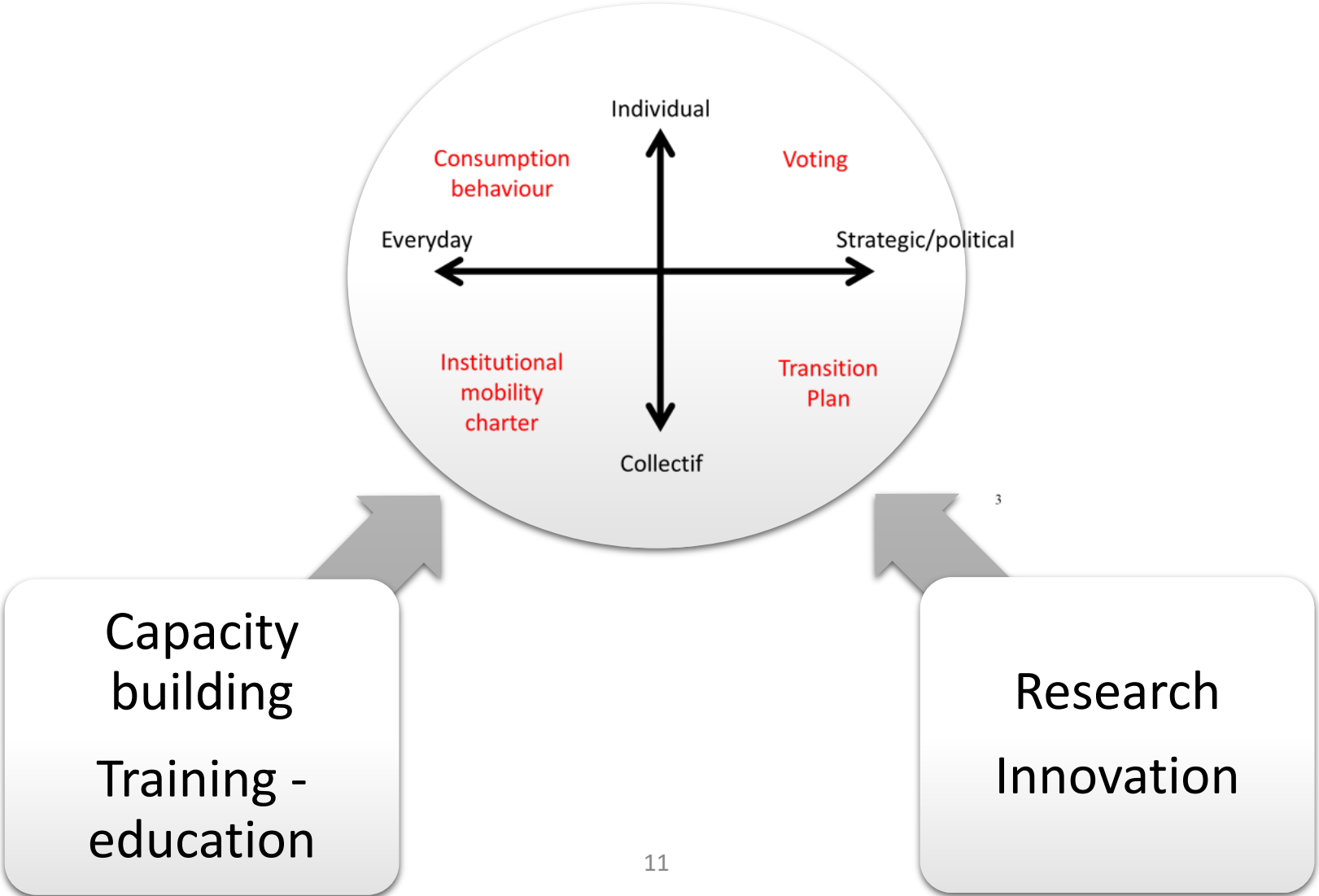
Educational resources supporting advanced water resources agency

29–31 May 2024, Paris

**M. Vanclooster, UCLouvain – Earth and Life Institute
Chair, Climate Knowledge Hub**



How humans can build a climate resilient world



Climate change: It's all about water



Een luchtbeeld van ondergelopen straten in Voeren
Foto: Tom Palmiers



Journal
Voor het vierde jaar op rij is de droogte heer en meester in de Catalaanse cavaregio
© de 25 apr 1 : 01:32

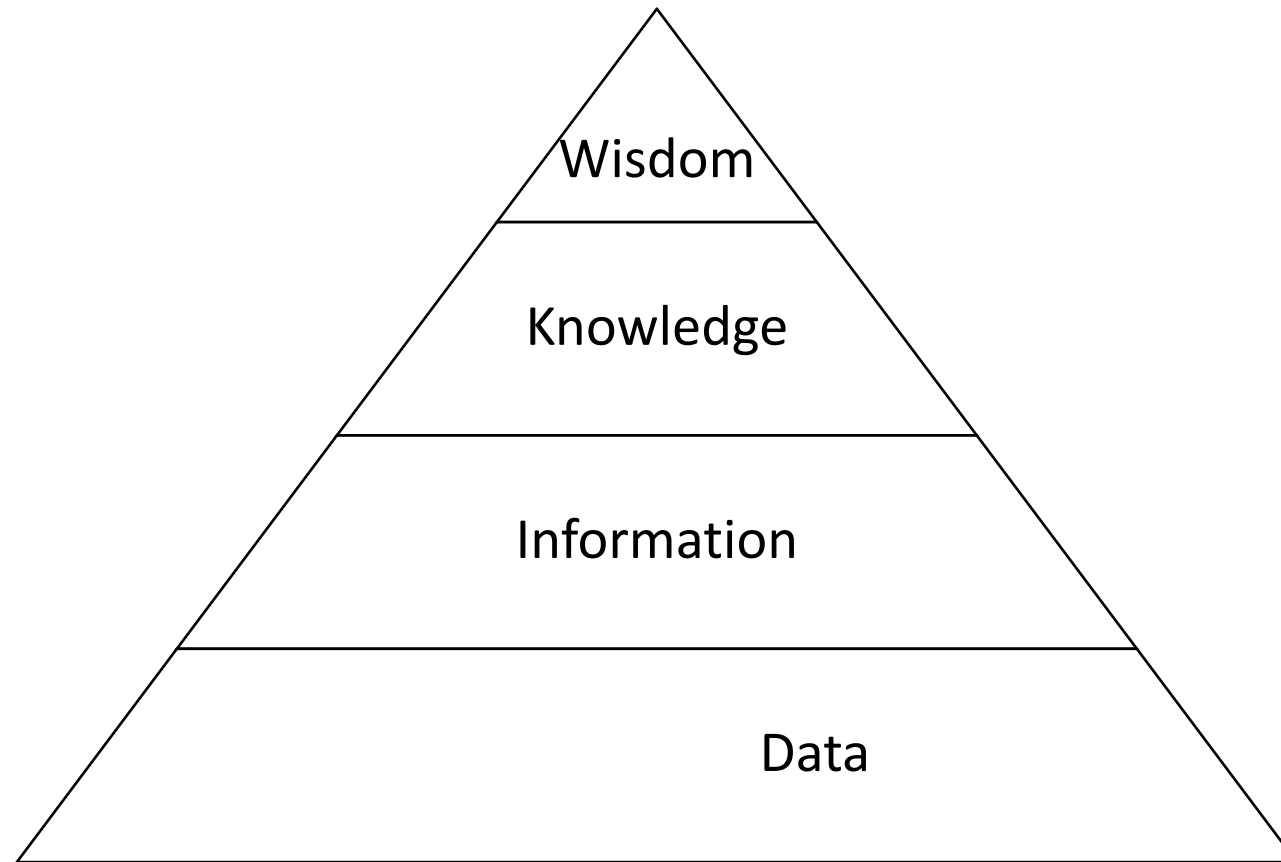


Vulle en natte straten, dat is het plaatje momenteel in Moelingen bij Voeren.
Foto: Jonathan Verwoert



Een Spaanse boer op zijn verdroogde akker, tijdens de droogte van lente 2023.
Foto: Europe Press 2023


Yes, there is scope for a technical narrative



Rescif MOOC resources

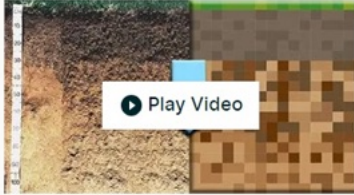
<https://www.rescif.net/en/projects/moocs/>

Home > Learn > [Water](#) > LouvainX: L'eau et les sols - Hydrodynamique des milieux poreux

 UCLouvain

LouvainX: L'eau et les sols - Hydrodynamique des milieux poreux

Ce cours de spécialisation vous donnera les clés pour comprendre, modéliser et mesurer les processus de transferts de l'eau dans le sol.



12 weeks
4-7 hours per week

Self-paced
Progress at your own speed

Free
Optional upgrade available

There is one session available:
6 448 already enrolled! After a course session ends, it will be [archived](#).

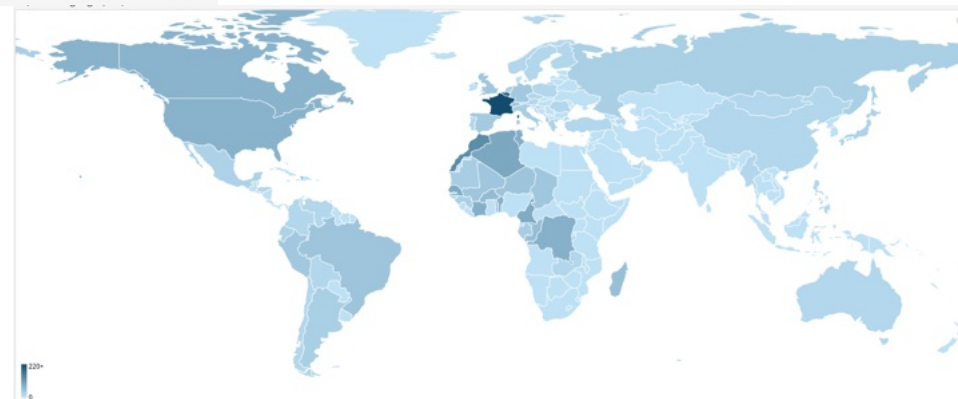
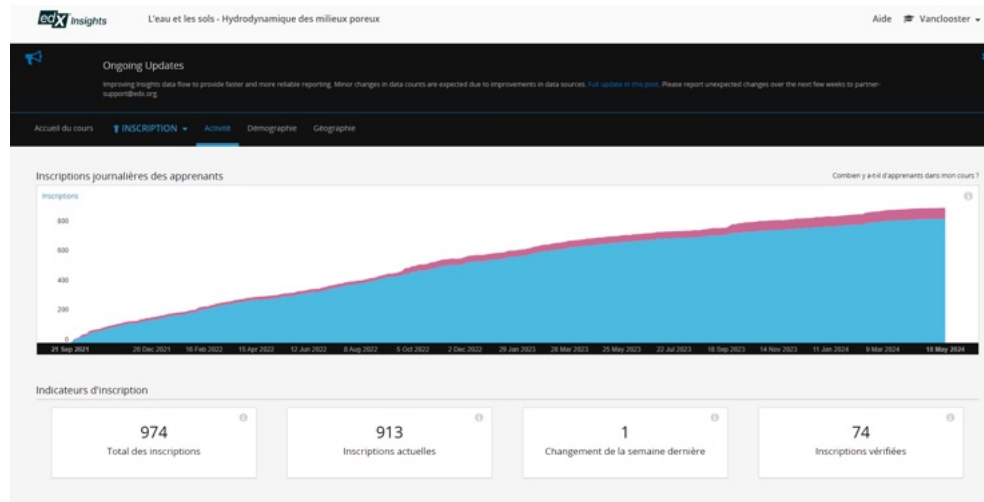
Starts May 20
Ends Aug 1

Enrolled: Go to course

[About](#) [What you'll learn](#) [Syllabus](#) [Instructors](#) [Ways to enroll](#)

Rescif MOOC resources

<https://www.rescif.net/en/projects/moocs/>



Rescif MOOC resources

<https://www.rescif.net/en/projects/moocs/>

L'eau et les sols MOOC

L'eau et les sols - MOOC
@Leauletlessols · 2.29K subscribers · 74 videos
Cette chaîne est associée au cours en ligne ouvert (MOOC) "L'eau et les sols - hydrodynamique..."

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SCIENCES HUMAINES ET SOCIALES
Sociétés et Humanités
Université Paris Cité



Interrogating educational responses to climate crisis: Reimagining climate change education in the Anthropocene

Yoko Mochizuki, EDA, Université Paris Cité

Audrey Bryan, Dublin City University

What is invisibilised, obscured or neglected within dominant framings of climate change education?

- Where does each of the panel presentations fit in the **five narratives of the Anthropocene**?
- How is the **learner** conceptualized in climate change education and more broadly in education for sustainable development?

Five narratives of the Anthropocene (Dürbeck 2019)

1. The **disaster** narrative
2. The **court** narrative
3. The **Great Transformation** narrative
4. The **(bio-)technological** narrative
5. The reflexively oriented **interdependency** narrative



Big question

If we see climate change as the failure of the “modern Baconian project” which has upheld the human subject capable of controlling “nature”,

what constitutes meaningful social – including educational – responses to the climate crisis?

Rethinking education

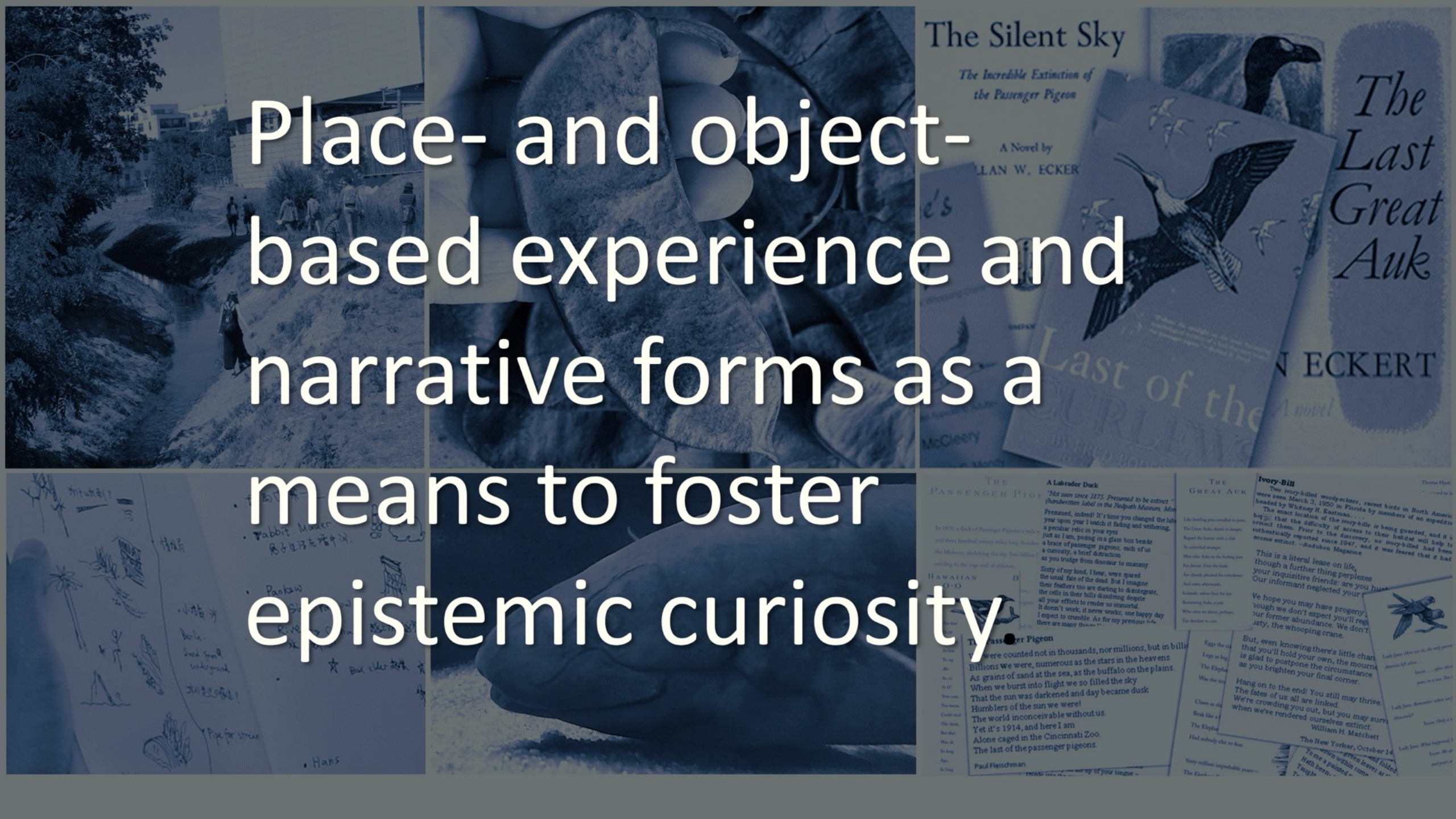
Education orthodoxies

- *Colonial, individualistic, learner-centered, developmentalist* orthodoxies
- anthropocentric understandings of humans as unique, separate or separable from nature, and as inherently superior to other species or elements
- an understanding of **agency** as a capacity that individuals possess

Towards interdependency narratives

- a more relational approach that problematizes **modernist hierarchies of being** and destabilizes human-centric orthodoxies
- new ways of understanding and imagining the complex **entanglements** of the human and nonhuman
- humanity as part of multispecies agential networks, calling into question the dichotomy of humans as subject and nature as object, blurring nature-culture dichotomies, and putting forward the concept of **distributed and multispecies agency**

Place- and object- based experience and narrative forms as a means to foster epistemic curiosity.



The Silent Sky

The Incredible Extinction of
the Passenger Pigeon

A Novel by
ALAN W. ECKER

The
Last
Great
Auk

JOHN ECKERT

THE
PASSENGER PIGEON

A Labrador Duck
"Not seen since 1875. Presumed to be extinct."
(handwritten label in the Field Museum, *Adon*)

In 1851, a flock of Passenger Pigeons a mile
and three hundred twenty miles long shadowed
the Malheur, obliterating the sky. Two billion
swarming in the eags end of oblivion.

HAWAIIAN
D-O

The
Passenger Pigeon

You were counted not in thousands, nor millions, but in billions
Billions we were, numerous as the stars in the heavens
As grains of sand at the sea, as the buffalo on the plains
When we burst into flight we so filled the sky
That the sun was darkened and day became dusk
Humblers of the sun we were!
The world inconceivable without us.
Yet it's 1914, and here I am
Alone caged in the Cincinnati Zoo
The last of the passenger pigeons.

Paul Fleischman

THE
GREAT AUK

Ivory-Bill
Two ivory-billed woodpeckers, rarest birds in North America
were seen March 3, 1950 in Florida by members of an expedition
headed by Whitney H. Eastman. . . .
The exact location of the ivory-bills is being guarded, and it
is hoped that the difficulty of access to their habitat will help to
protect them. Prior to the discovery, no ivory-billed had been
authentically reported since 1947, and it was feared that it had
become extinct. -Audubon Magazine

I like looking you straight in the eye.
The Great Auk, death to danger.
Repeat the horror with a shift
An accidental stranger.

How else Auk to the holding pen?
For dinner. First the birds
Are clearly phoned for extinction
And seen afterwards.

Islands seldom find the last
Remaining Auk, a pair
Who were so alone, perhaps.
You doubt to come.

Eggs the size
Legs as big
The Elephant

Was the tree
Claws as sharp
Beak like a
The Elephant

Had nobody else to face.

Sixty million impossible years—
The Elephant

This is a literal lease on life,
though a further thing perplexes
your inquisitive friends: are you human?
Our informant neglected your
rough we don't expect you'll regret
our former abundance. We don't
doubt, the whooping crane.

But, even knowing there's little chance
that you'll hold your own, the mourner
is glad to postpone the circumstance
as you brighten your final corner.

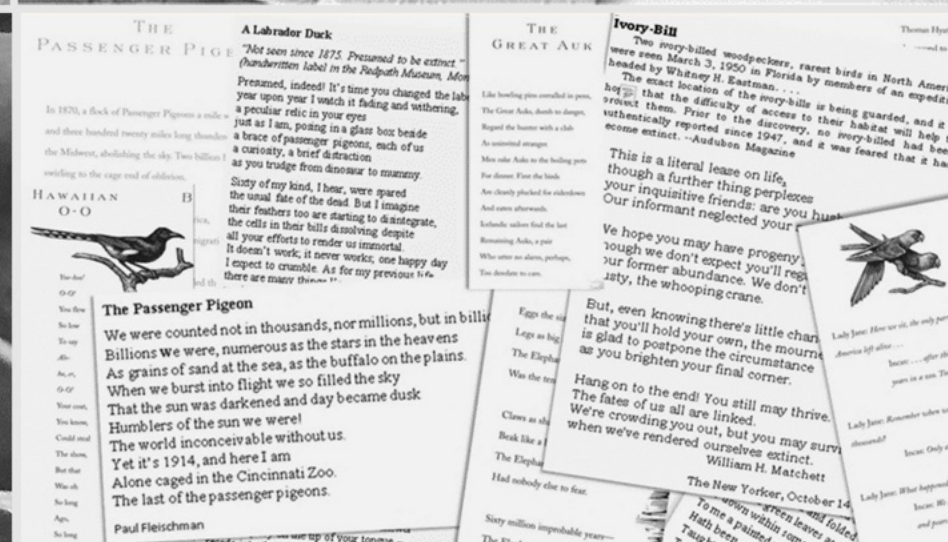
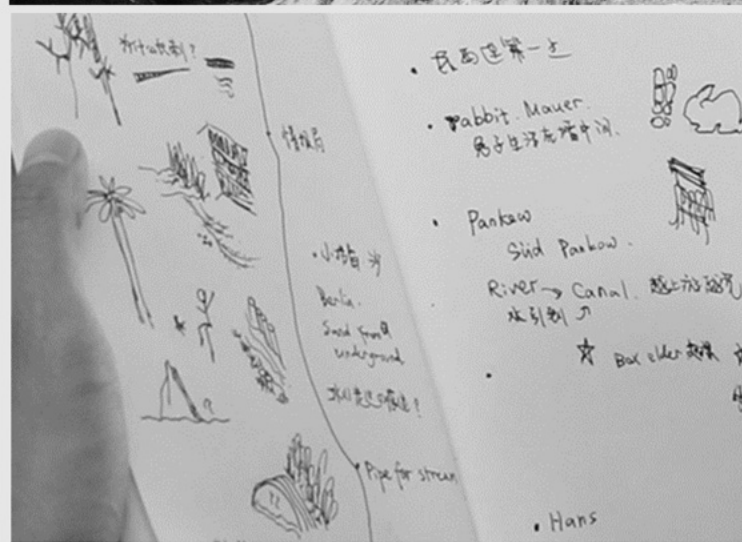
Hang on to the end! You still may thrive.
The fates of us all are linked.
We're crowding you out, but you may survive
when we've rendered ourselves extinct.

William H. Matchett

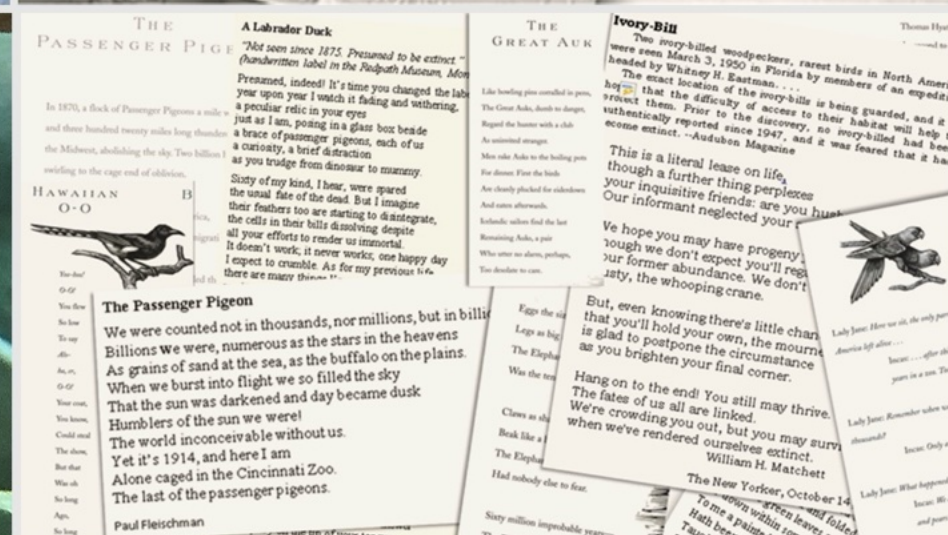
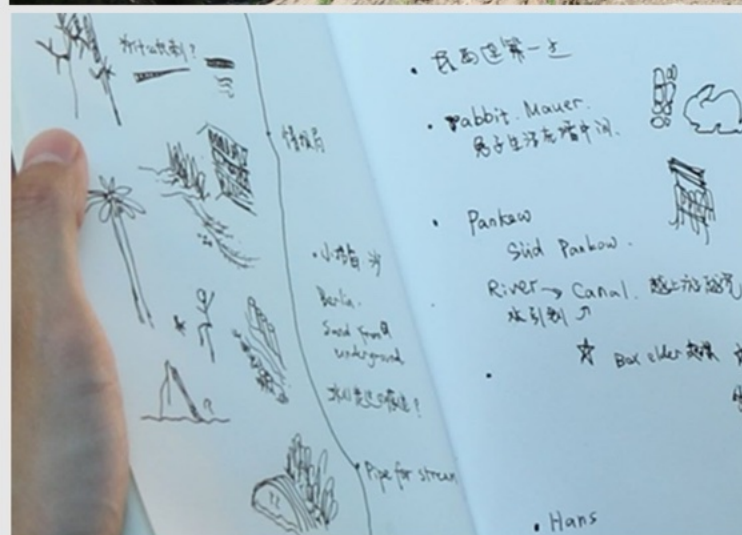
The New Yorker, October 14,
To me a painted
Hath been
Tangle

Lady Jane: How we sit, the only person
America left after
Sixty million impossible years in a row. The
Lady Jane: Remember when we
Lady Jane: What happened?
Lady Jane: We sit
and pour it

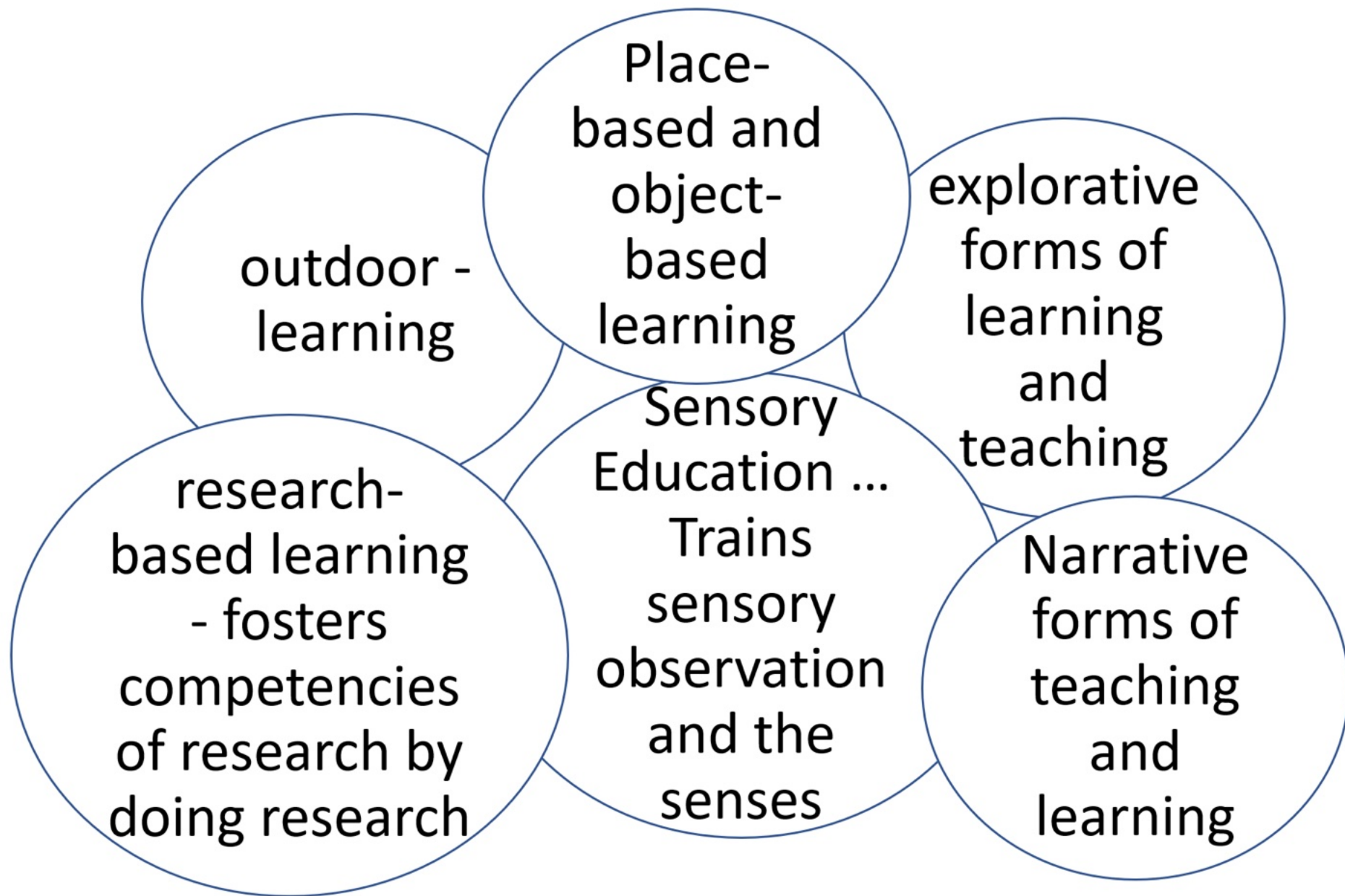
Lady Jane: How we sit, the only person
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Enquiry-learning uses place, employs objects or explores the power of narrative forms.



Enquiry-learning uses place, employs objects or explores the power of narrative forms.



Object-based Learning - plants invite sensory exploration



- olfactory
- gustatory
- haptic
- acoustic
- visual

Decaisnea fargesii (Lardizabalaceae) „Dead man’s finger“, „Mau shi gua“

Object-based Learning -

the plant kingdom abounds in illustrative examples



Eucommia ulmoides (Eucommiaceae)
Image: M. Robischon

- striking morphological and physiological adaptations
- novelty may trigger epistemic curiosity
- engagement with an unusual plant may lead to new hypotheses



Maclura pomifera



Maclura pomifera





Asimina triloba



Heteralocha acutirostris



Heteralocha acutirostris



Ectopistes migratorius





Ectopistes migratorius



THE PASSENGER PIGEON

In 1870, a flock of Passenger Pigeons a mile wide and three hundred twenty miles long thundered over the Midwest, abolishing the sky. Two billion swirling to the cage end of oblivion.

HAWAIIAN O-O



Yoo-hoo!
O-O!
You flew
So low
To say
Alo-
ba, er,
O-O!
Your coat,
You know,
Could steal
The show,
But that
Was oh
So long
Ago,
So long
Ago,
So long,
O-O.

A Labrador Duck

"Not seen since 1875. Presumed extinct."
(handwritten label in the Realist)

Presumed, indeed! It's time year upon year I watch it fade a peculiar relic in your eyes just as I am, posing in a glass a brace of passenger pigeons a curiosity, a brief distraction as you trudge from dinosaur

Sixty of my kind, I hear, were the usual fate of the dead. But their feathers too are starting to the cells in their bills dissolving all your efforts to render us immortal. It doesn't work; it never works. I expect to crumble. As for my there are many things I'm proud you'll never know - our flyways

THE GREAT AUK

Like bowling pins corralled in pens,
The Great Auks, dumb to danger,
Regard the hunter with a club
As uninvited stranger.
Men rake Auks to the boiling pots
For dinner. First the birds
Are cleanly plucked for ciderdown
And eaten afterwards.
Icelandic sailors find the last
Remaining Auks, a pair
Who utter no alarm, perhaps,
Too desolate to care.

THE ELEPHANT BIRD

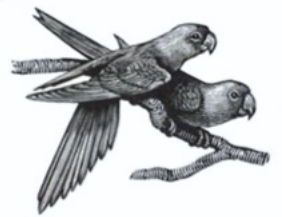


Eggs the size of a dinosaur's,
Legs as big as a beam,
The Elephant Bird, the Elephant Bird
Was the ten-foot bird supreme.
Claws as sharp as razor blades,
Beak like a broad-head spear,
The Elephant Bird, the Elephant Bird
Had nobody else to fear.

Sixty million improbable years—
The Elephant Bird's timespan—
Till the Elephant Bird, the Elephant Bird
Met up with the likes of Man

Ivory-Bill

Two ivory-billed woodpeckers, rarest birds in North America, were seen March 3, 1944, in Florida by members of an expedition headed by White-Rose. The bird was shot and preserved.



Lady Jane: Here we sit, the only parrot pair in America left alive...
Incas: ... after thirty-two years in a zoo. Too old to breed.

Lady Jane: Remember when we flew by the thousands?
Incas: Only a century ago.

Lady Jane: What happened, Incas?
Incas: We ate their grain and pears and apples.

Lady Jane: They destroyed our homes.
Incas: Everyone but Man inherits a cage.

The Passenger Pigeon

We were counted not in thousands, nor millions
Billions we were, numerous as the stars in the sky
As grains of sand at the sea, as the buffalo on the plain
When we burst into flight we so filled the sky
That the sun was darkened and day became night
Humblers of the sun we were!
The world inconceivable without us.
Yet it's 1914, and here I am
Alone caged in the Cincinnati Zoo.
The last of the passenger pigeons.

Paul Fleischman

J. Patrick Lewis

From *The Silver Palace Restaurant* (MOUP, 2005)

Far down within some shadowy lake,
The green leaves as they shake
To me a painted parrot
Light me my alphabet to say
Up my very earliest words
In the wild world
With a

So here I stand: preserved and catalogued and a trophy of your deadly skill, while you - still free to taste the wind and weather, peering in at me as though I had the answer to some query on the tip of your tongue -

New Yorker, October 14, 1950 P. 51.

The Silent Sky

*The Incredible Extinction of
the Passenger Pigeon*

A Novel by

ALLAN W. ECKERT



COMPANT

The Last Passenger



JAMES
RALPH
JOHNSON

Josephine's Story

-A True Story about a Special Whooping Crane-

-A Child's Book that also Appeals to Adults-

Patsy R. McCleery

Illustrations by Patricia C. Mondy

Last of the CURLEWS

BY FRED BODSWORTH
ILLUSTRATED BY T. M. SHORR



The Last Great Auk

ALLAN W. ECKERT

A novel

Work in progress...

we aim to explore further forms of place-, object- and narrative- centered forms of learning and teaching and their effect on 'epistemic curiosity'.



Sharp decline in children reading for pleasure, survey finds

The Observer Schools
Writing skills in sharp decline

Education Correspondent
Süddeutsche Zeitung
SZ.de
München Bayern Kultur Gesellschaft

Studie: Deutsche lesen weniger
nie was mit Pisa

The Telegraph

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Fewer than half of readers finished bestselling novels

Having a bestselling novel is no guarantee it will actually be read, according to a study

News Opinion Sport Culture Lifestyle
Film Music TV & radio Books Art & design Stage Games Classical

The Observer Children and teenagers
Modern life means children miss out on reading a good book

THE NEW YORKER
CULTURAL COMMENT
WHY WE DON'T READ, REVISITED
June 14, 2010

Publishing
Literary fiction in crisis as sales drop dramatically, Arts Council England reports
New figures show that fewer than half of readers finished bestselling novels, as ACE blames falling sales

Frankfurter Allgemeine
Feuilleton

MEDIEN BÜHNE FILM POP KUNST KUNSTMARKT HOCH/SCHULE

GSPOLITIK-KOMMENTAR

en Buchstaben fehlt der Sinn

Guardian
Leisure Reading Behaviour of Young Children in Singapore
Shahen M...

Schools
Teachers in UK report growing 'vocabulary deficiency'
Problem exists throughout primary and secondary school, leading to lower self-esteem and negative behaviour

10 Key Findings

Decline in Literary Reading

	1982	1992	2002
% of U.S. Adult Population Reading Literature	56.9	54.0	46.7
Number of Literary Readers (in millions)	96	100	96

- The percentage of adult Americans reading literature has dropped dramatically over the past 20 years.
- Less than half of the adult American population now reads literature.
- The 10 percentage point decline in literary reading represents a loss of 20 million potential readers.
- Only the strong growth in overall U.S. population of nearly 40 million adults from 1982 to 2002 allowed the actual number of readers to remain flat at 96 million.

Trends in Book and Literary Reading
Percentage of U.S. Adult Population Reading Literature

The Riddle of the Voodoo Tree: An Ecological Thinking, Using the Example of Honey Locust (*Gleditsia triacanthos*)

Share Tools Search Site

Marcel Robischon, *The American Biology Teacher* (2019), 81(3), 146-150.
<https://doi.org/10.1525/abt.2019.81.3.146>

ABSTRACT

In organismic biology, the formation of ecological and evolutionary hypotheses on the basis of observable morphologies is a central element of research, and by extension of teaching and learning. Often it is necessary to take account of complex combinations of factors, some of which may be far from obvious. In the work described here, hypothesis formation and testing was exercised and studied in a learner-centered and object-based manner using an anachronistic, seemingly "nonsensical" plant, *Maclura pomifera* (Moraceae), in which the link between structure and function only becomes clear when considering past faunistic environments. The element of the unexpected and the allure of the large animals is thought to add to epistemic curiosity and student motivation to engage in the study of plants.

Key Words: Object-based learning; hypothesis formation; ecological anachronisms; megaherbivores; paleoecology; Osage-orange; *Maclura pomifera*.

○ Natural Curiosity & Natural Science: Explorative, Object-Based Inquiry Learning

Exploration and observation as steps toward hypothesis formation and testing are fundamental to research and thus to inquiry-based learning and teaching in organismic biology, an authentic experience of the scientific method is thought to profit considerably from

The explorative mode of object-based learning is used in a biological context, drawing on the multiple facets a biological object

them to deduce just the sort of

of scholarly enquiry default, [this] necessary to learning." Biologically have to make normally have to fit results. In this regard work outside the botanical foci are organisms which involve an experiential learning activity on the multiple facets a The aim is to exercise ecological and to form ecological of the object.

The to such objects that the same time expected to tion with n. inquisitive m. (Kador et al., 2018) In organism often involves the ecological function which a particular behavior in an organism

Object-based learning is an approach that aims to foster observational skills and sensory awareness. Paradoxical plant objects that do not lend themselves to all-too-easy explanations and interpretations can be used to practice the search for ecological explanations and the formation of evolutionary hypotheses. They can be the basis of particularly fruitful and rewarding learning experiences. *Gleditsia triacanthos*, the honey locust, is a commonly planted ornamental tree. It exhibits striking structures of defense against – and fruit that point to a mutualism with – large animals. These structures, possibly developed in coevolution with Pleistocene faunas, invite a discussion of the complex, neither fully antagonistic nor fully mutualistic, relationships between plants and animals.

Keywords: *Gleditsia triacanthos*, honey locust, ecological thinking, systems thinking, plant defense structures, extinct megaherbivores, plant-herbivore interactions



Wendy Quetzal Morel Schramm
Humboldt University - Agricultural ecology

The Handprint Initiative



    @thehandprintinitiative

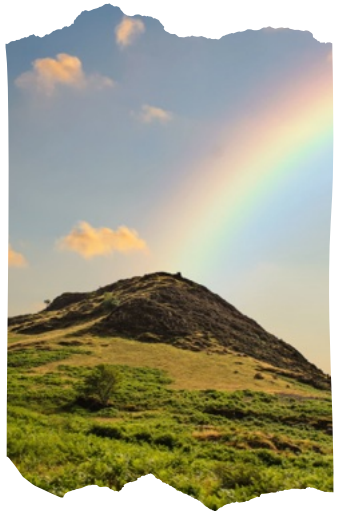
Visit www.thehandprintinitiative.org





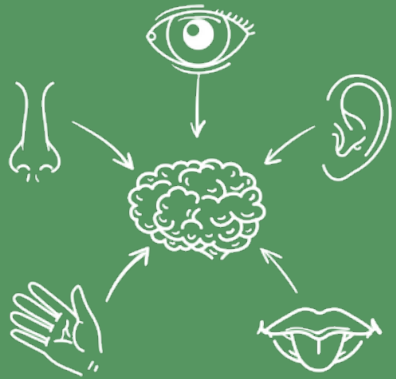


Two visions, one reality



It all starts with...

Perception



Value



Attitude

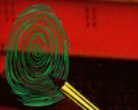


Favorable or unfavorable beliefs, affect, and behavioural intentions towards environmentally related activities or issues (Gifford & Sussman, 2012; Macías Zambrano L. H., 2017; Schultz et al., 2004)



The world is about to end... and it's your fault

- We are born with an environmental debt
- Learned hopelessness (Nagel, 2005)
- Apathy, one of the largest barriers of education. ("So why should I care?")
- Perspective about the future contributes to the actions and meaning we give to our present (Bell, cited in Schreiner & Sjøberg, 2004)



Their eyes...



...their future



The Handprint Initiative

The Handprint Initiative

Learning in and with the world

Development of the key competences for sustainability



Overcome limitations of other approaches



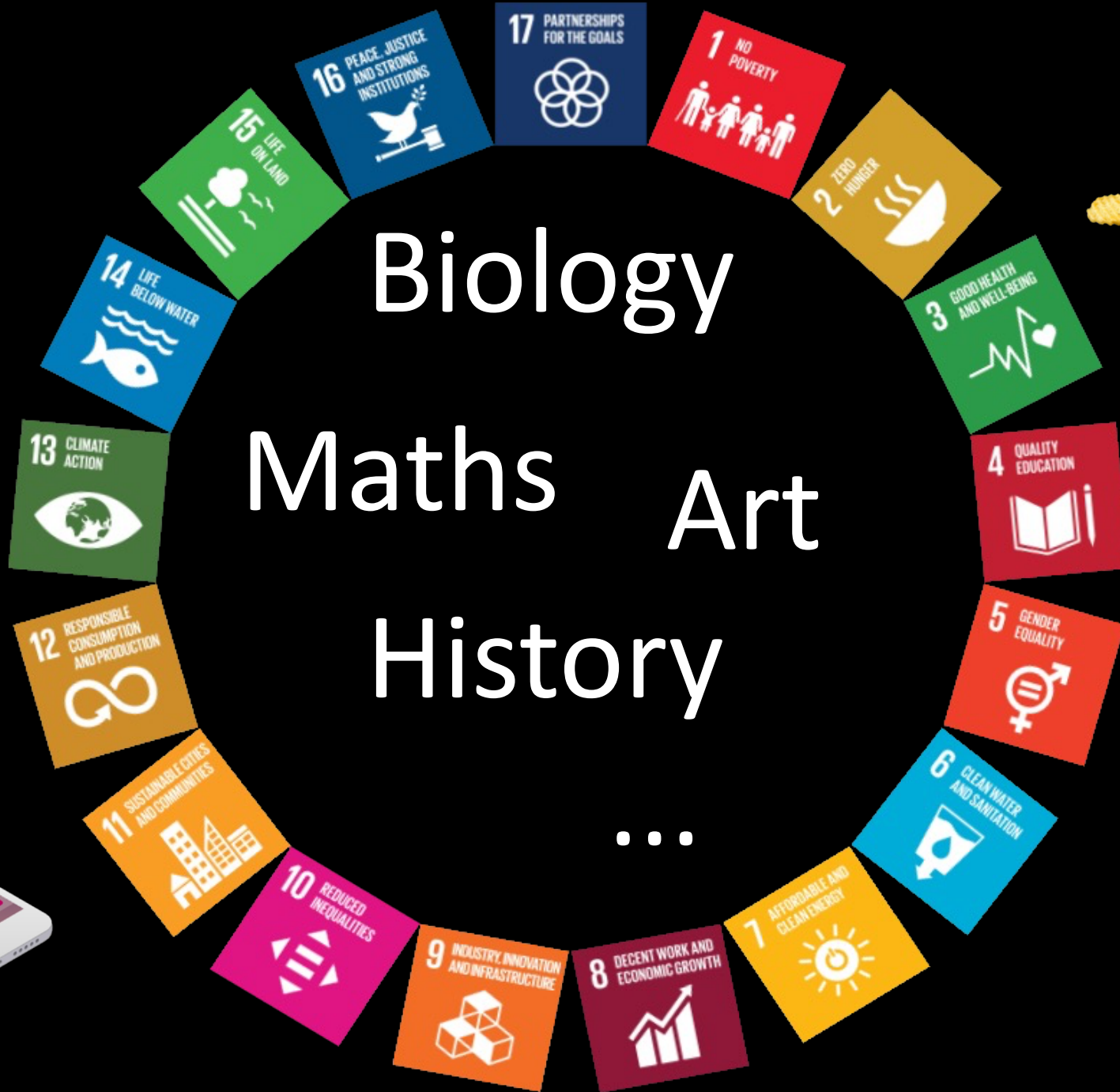
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Biology

Maths Art

History

...

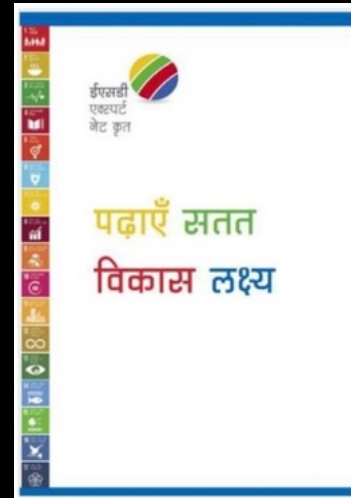
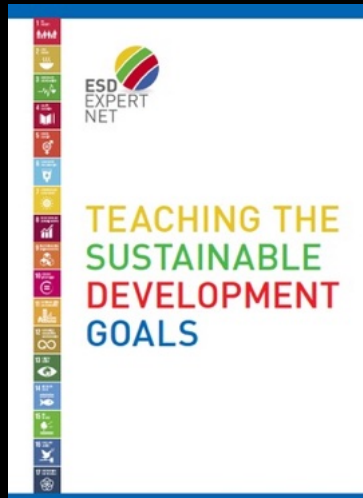
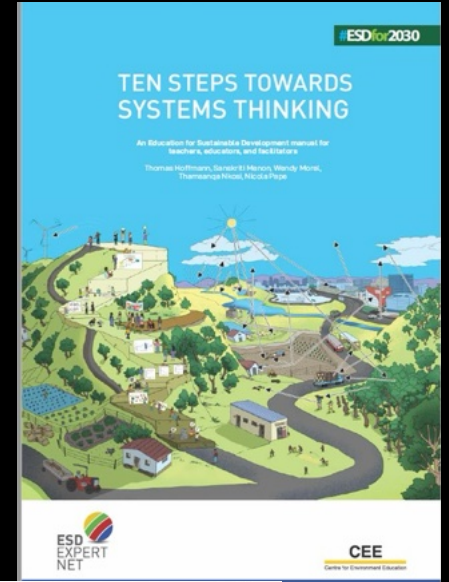
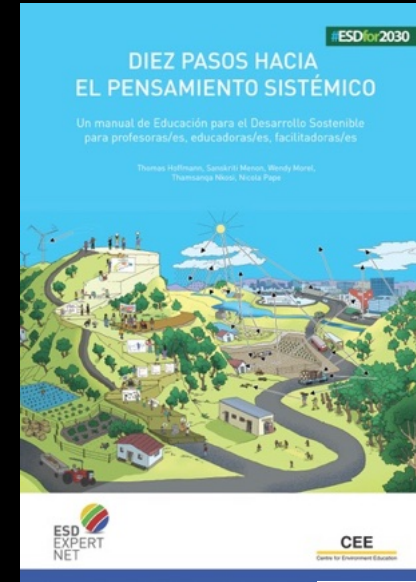




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Service für Entwicklungsinitiativen



ESD EXPERT NET





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Vanclooster**

Moderator

**Xiaofeng
Guo**

**Yacine
Boufkhad**



UCLouvain



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Round table: Educational resources and climate change

Co-organised by IARTEM and Circle U [Knowledge Hub on Climate](#)

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Co-funded by the Erasmus+ and Horizon Europe programmes of the European Union.