

Waddenlab

Presenters:

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Waddenlab: How to keep the Wadden sea healthy?

- *Idea*: Partners in the Park, organizing an event that gives insight in nature
- the **complexity of nature** ‘overwhelms’ the participants, who rarely leave their hometowns
- *In the US*: huge National Parks like *Yellowstone*, *Brice* or the *Grand Canyon*
- Student were literally overwhelmed by ‘nature’, in all kinds of aspects
(see here: <https://youtu.be/Em4sDc07R7M>)



How to transform that to the Netherlands?

- *What area would fit?*
Veluwe?
Wadden sea is almost the only 'vast and complex' area
- And more: only very little of that nature is visible, what makes it even more complex
- Islands, water, coast, mud, animals



How to prepare students for that vastness and complexity?

- Theoretical preparation:
Wadden Academy, doing research in, on and about the Wadden sea
- Students determined what themes to work on:
- *Beauty*, - *People's Mind*, - *Ecosystem*, - *Chemical Pollution*,
- *Preserve & Conservation*
- Themes were prepared by students in groups in four Saturdays and by groups online



'Extra' in 2023

- In 2023: 'natural philosopher' *Matthijs Schouten* gave a lecture on:
 - what can be our 'contract with nature', how do we ourselves relate to nature?
- Mind-blowing lecture on how we see nature: are we in the top of the pyramid or are we fully part of nature and all in between?
- Based on ideas from Aristoteles 'reign' over nature to nowadays 'to inter-be' with nature



That's how we started the 7-day trip



New Group Ecosystem

1. Getting to know each other
2. Choosing and getting to know the Theme
 - Learning about the Ecosystem on the Wad
3. Developing Aim
 - Provide Opportunities to engage on a deep level with our theme
 - Workshops as a self-learning process
 - Learn outside utilising nature as a direct reference



Execution

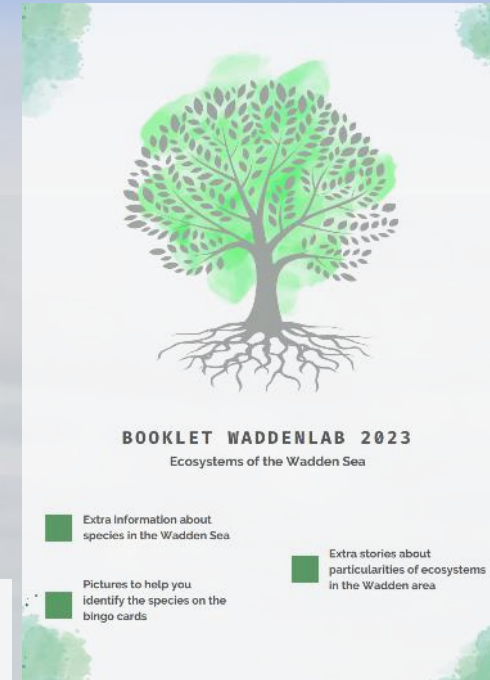
1. Booklet

→ Tool to store and share relevant information

2. Bingo Letting Students immerse in our theme

→ Jozful learning experience throughout the trip

3. Meet Experts at Natuurmonumente in Texel



Conclusion of the Trip

Evaluation

Successful Project Execution

Additional learnings in Sailing and other Themes

- Interconnectedness of nature
- Not everything went as planned

Memorables

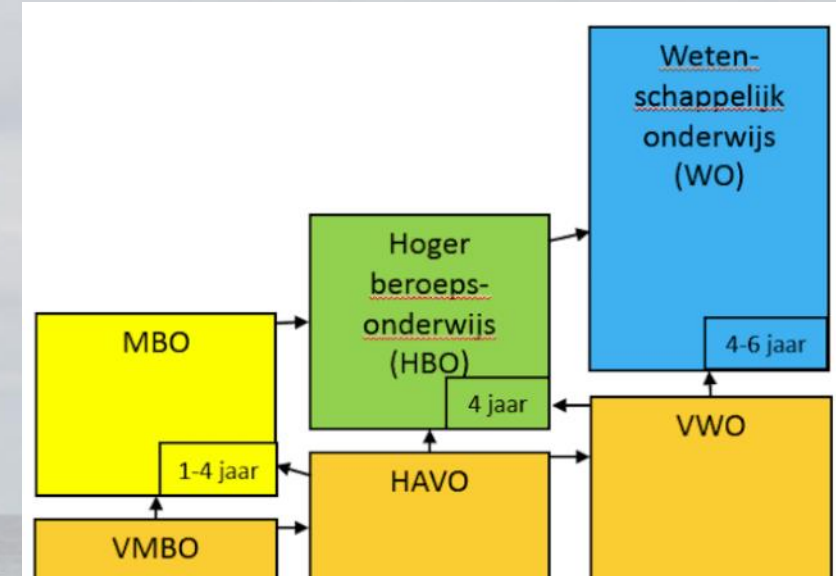
- Growing together as a group
- Experiences in Nature



Waddenlab: How to keep the Wadden sea healthy?

The process

- MBO (vocational education), HBO (applied sciences) and Universities
- Honors and Excellent Students can apply
- A total of 28 students can participate
- A total of 6 tutors can participate
- Participating institutions must pay a fee (1.000 e)
- Participants pay a personal fee (100 e)
- subsidized by Wadden Academy



Waddenlab: How to keep the Wadden sea healthy?

The process

- 4 applied science institutions
 - Avanshogeschool
 - Hanzehogeschool
 - HogeschoolRotterdam
 - HogeschoolUtrecht
- 2 universities
 - Eindhoven University of technology
 - Twente University of technology
- 2 vocational education institutions
 - Noorderpoort
 - Yuverta



Waddenlab: How to keep the Wadden sea healthy?

The process

- The Waddenlab research is divided into 3 consecutive phases
- Preparation days
 - January, March, April and June
- Execution, Sailing days
 - July 15 to 22 July 2023
- Evaluation day
 - October



Waddenlab: How to keep the Wadden sea healthy?

The process

- Preparation days
 - Talk leading experts on Wadden sea
 - Getting to know each other
 - Students constructing research questions
 - *BEAUTY*
 - *CHEMICAL POLLUTION*
 - *PRESERVATION & PROTECTION*
 - *PEOPLE'S MIND*
 - *ECOSYSTEM*



Waddenlab: How to keep the Wadden sea healthy?

The process

- Sailing days
 - *Sailing instructions*
 - *Explanations to the group*
 - *Carrying out the research*
 - *Group participation*
 - *Sharing the proceeds*
 - *Foodpreperation etc.*
 - **SAILING**



Waddenlab: How to keep the Wadden sea healthy?

The process

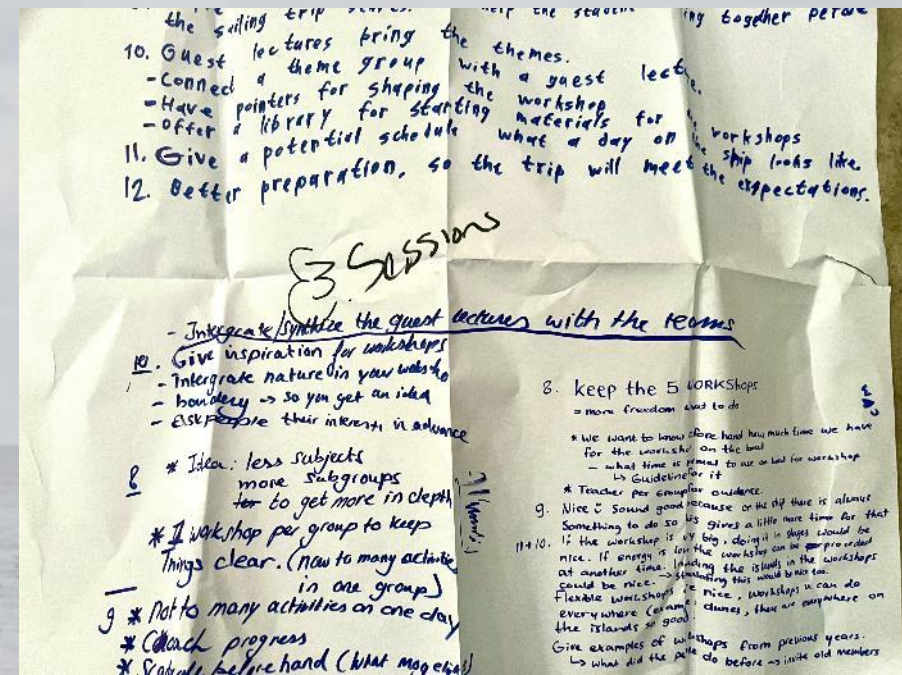
○ Evaluation day

○ TIPS

- Sailing
- Food things
- Depth of research

○ TOPS

- Incredible experience
- gained even more respect for fragile nature
- Flexible workshops are nice
- Sailing



What is the scope for learning in this way of working and how was learning stimulated?

About the scope:

- The aim was to get students to be aware of the **complexity** of the Wadden sea
- The 'driving' question was '**How to keep the Wadden sea healthy?**'
- *Then:* would each theme expose a piece of that supposed complexity?



What is the scope for learning in this way of working and how was learning stimulated?

About stimulating learning:

- The **themes** they worked on were derived from the group and studied with the group
- The themes were used by the students to design their own sessions during the trip on the ship
- Theoretical input was provided through:
 - the 'system' of nature, ecology;
 - morphology of the Wad;
 - SDG's and how to 'read' them;
 - nature and philosophy (or philosophy in nature)



What is the scope for learning in this way of working and how was learning stimulated?

About boundary crossing:

- Students bring **their own education** and back grounds;
- Also bring their personal 'focus' on knowledge
- mbo – hbo – wo back grounds
- For all students the subject 'Wadden sea' was new and unknown, so new area to explore



What is the scope for learning in this way of working and how was learning stimulated?

About learning results:

- Students learned not only about the **complexity** of nature, but also about its **interconnections** and **dependencies**
- Students learned what the **Wadden sea itself**, how it works, why it is there, how the water runs, sand (we were grounded twice)
- They learned about their **theme** and **how to learn it to others**: by workshops, role plays, bingo's, future literacy, doing tests,
- And they learned how to sail on open water



What is the scope for learning in this way of working and how was learning stimulated?

About the evaluation:

- **Different perspectives** between students are appreciated - education wise, they hardly noticed differences between mbo-hbo-wo
- The importance of feeling 'a group'! (community)
- The **complexity of the Wadden sea** has become clearer
- For all students: the **complexity of nature as a 'system' is an understanding that has grown strongly** (also thanks to philosophy in nature by Matthijs Schouten)



Thank you

Q & A

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Waddenlab

