



# ISLAND SCHOOLS

## Ocean Plastics Teacher Pack



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## About this teacher pack

This teacher pack is designed to support Island School teachers who are embarking on the first year of the Island School Educational Programme together with their pupils. How the programme works as a whole is explained in more detail below.

The teacher pack provides lesson or 'session' plans, which can be used as flexibly as you'd like. Feel free to make use of the materials in the 'additional materials' section of the pack or integrate your own materials. Take as long or short as you like to follow the programme in coordination with your partner school. And most importantly: have fun and follow the pupils' curiosity!

### Why Island Schools?

*Working together on a European level to create sustainable education for Europe's island communities*

De Jutter is a school on the Dutch island of Vlieland, about two hours by ferry from the mainland. It is now the only school on the island after the primary and secondary schools were merged due to the dwindling number of school-age children in the island's one village. This is a unique situation in the Netherlands, but my no means an exception when you zoom out to a European level. From Scotland to Greece, Finland to Croatia, island schools across Europe are finding ways to provide quality education in spite of their isolated locations and small size. But what could they achieve if they work together?

This became the Island Schools project (originally called iSHRINK) which in August 2020 was approved a three-year grant under the EU's Erasmus+ programme. The Island Schools project connects Europe's island schools with one another to create innovative education based around sustainability challenges. With project partners from Iceland, the Netherlands, the UK, Spain and Greece, the project sees top universities working on education and sustainability work with island schools to co-create learning materials which place the emphasis on pupils' active citizenship and the sustainable future of their islands.



## Island Schools Educational Programme

The core of the Island Schools project is our educational programme which facilitates collaboration between Europe's island schools. This teacher pack forms a key part of the programme. But how does it work?

### Step 1: Matching

Step 1 of the Island Schools programme is finding your perfect match as an Island School. Using the platform on our website, you create a profile for your school and look for another island school which is similar to yours using our search. Reach out to the other and make a match! Once you've both agreed that you're a good fit, you're ready to start using our educational programme together.

### Step 2: Ocean plastics

Step 2 is the first year of the programme for your pupils, supported by the teacher kit you're reading right now! Pupils are introduced to sustainability through the topic of ocean plastics and also take the time to get to know their partner school. You can also work with your pupils and the partner school to choose which topic they'd like to address the next academic year.

### Step 3:

#### Sustainable tourism

If you've chosen sustainable tourism, you'll pick up your partnership again the next academic year and work with the same cohort of pupils on the topic of sustainable tourism. This is supported by a teacher pack.

#### Sustainable transport

If you've chosen sustainable transport, you'll pick up your partnership again the next academic year and work with the same cohort of pupils on the topic of sustainable transport. This is supported by a teacher pack.

### Step 4:

#### Repeat with a new cohort

You can repeat the whole process all over again, minus the matching. Bring the next generation of pupils into contact with sustainability and your partner school by following the two-year programme again.

#### Work with another island school

Ready to work with a different island school? Return to our online platform and find your next partner school.

You can of course also mix and match or have multiple collaborations going at once with different educational levels! To ensure the longevity of the project we'd love to expand the sustainability topics we're able to work on. Get in touch if you'd like to collaborate on developing more teacher packs for Island Schools!

## Why ocean plastics?

The choice of ocean plastics as our first topic didn't only come from the schools and universities who work together in Island Schools – it was our pupils! Pupils from schools in Iceland, The Netherlands, Scotland and Greece were asked what topics they'd like to work on as part of our first pilot matches between schools, and the choice was unanimous: ocean plastics. We realised that it's a great topic for introducing sustainability to pupils, especially pupils on islands. It involves thinking in systems, various stakeholders, even ocean currents – but it remains a very clear ecological challenge.

In the second year of the programme we expand pupils' ideas of sustainability beyond just the ecological through the topics of sustainable tourism or sustainable transport. Highly relevant for islands, these topics bring in the complexities of economics and society alongside ecological issues.

## Programme flow

Our educational programme is designed to work for both schools that are able to travel and schools that prefer to collaborate digitally, either due to budgetary or geographical restrictions. As explained in more detail below, sessions 6 and 7 are designed to take place during a mobility to the partner island. However, they can also work very well digitally.

Island schools that are located in Erasmus+ programme countries can consider applying for an Erasmus+ mobility grant to support travel to their partner school. More information about mobility grants can be found [here](#).



## Ocean Plastics Sessions

The first year of the two-year programme is devoted to ocean plastics. This introduces concepts of sustainability and gives space for the two island schools to get to know one another. The flow of the 8 sessions is as follows:

### Session 1: Introductions

In this first week, pupils will be introduced to the topic of sustainability and the Island Schools project. They'll then start to think about plastic and the role that it plays in our lives.

### Session 3: Plastics on your island

Pupils do research on how plastics affect their own island – the aim for this session is to gather as much information as possible by exploring their island. They'll be sorting and refining this information in session 5

### Session 2: Exploring your island

Pupils travel “back” to their own island. In doing so, the pupils will explore the culture, history, geography and language of their own island.

### Session 4: Get to know your partner island

This time, pupils “travel” virtually to their partner island and learn about its culture, history, geography and language, etc.



**Session 5: Choosing a challenge**

This time, pupils use the information of previous sessions and brainstorm the main problems their island has regarding plastics. They have a list of problems/challenges that they then work on together in sessions 6 and 7.

**Session 7: Presenting the solution**

Pupils share the solutions they've created with important people from the island community – parents, politicians and islanders that can be part of the solution.

**Session 6: Working together**

Pupils work in groups to find and build solutions for the island's plastic challenges. They work in groups formed by students from both schools.

**Session 8: Looking back, looking forward**

In the final session the pupils look back at the past weeks and then look forward, imagining a future scenario for their island.

## Session 1: Introductions

### General description:

In this first week, pupils will be introduced to the topic of sustainability and the Island Schools project. They'll then start to think about plastic and the role that it plays in our lives.

### Learning outcomes

- At the end of the session, pupils should be able to:
- Know SDG that relates to the project
- Explain some of the effects of the ocean on humans and the effects of humans on the oceans
- Explain the effects of the sea on climate, oxygen production, food and biodiversity
- Describe the origin and history of plastic and understand the difference between responsible use and waste
- Draw on plastic pollution in the sea

### Materials needed

1. SDG goals: short videos or visit the UN's own SDG website.
2. Access to computers and iPads
3. Article/video about Sustainability/Environment/Ocean/Glaciers (see the additional materials at the end of this teacher pack).
4. As an extension, you could invite an influencer on environmental issues from your own island to introduce either the topic of sustainability or of ocean plastics, as appropriate.

### Structure and activities

#### 1. Teacher introduces the Sustainable Developmental Goals (SDG), making use of videos or websites.

- Students in small groups choose to work with two to three goals using computers or phones. Alternatively, you can introduce the goals to the pupils in a plenary style or using handouts from the materials here.
- Discussion between students, on the relations between their island and the goals. Why do we need these goals? What do they call for? What is the meaning of the goals? To whom do they apply?
- Groups introduce the goals they worked on for the rest of the students and teachers. Later this session following work on their assignments they could introduce their work for more people, even record their presentations.



## 2. Teacher introduces the Island Schools project.

Pupils noticed that some of the goals they discovered had a link to their island, but they are just one of many islands in Europe! As part of the project, they'll be working with a school on a different island. A shared set of goals like the SDGs helps us to realise that even if we live in different places, we have the same challenges. They'll also present their work to other islanders like parents and politicians, so they need to create some invitations!

**3. The Ocean as a resource.** Teachers and students discuss the work ahead and focus on the relationship between humans and oceans.

- How do humans depend on oceans and how does the ocean depend on humans?
- Discussion between students, create a mind map and connect ideas
- Discuss the connections between humans and the ocean

**4. Plastics.** Provide basic information on plastic:

- What is plastic, what is it made of and how is it made? How do we use plastic?
- How is my life related to plastic? How do I use plastic? What can I do to have a positive impact?

**5. Article, video, etc. - preferably from your own country – which introduces some of the problems our oceans are experiencing because of climate change.**

There are many ways in which our oceans are affected by climate change – perhaps the biggest is sea levels rising, but also overfishing and plastics in our oceans. Introduce that in a familiar way with your own choice of article or video, or get inspiration from our additional resources.

## Feedback and wrap-up

Final discussions as a group about what they've learnt. Were there any things that really surprised them? Have they ever met children from another island? What do they think the other island might be like?

Introduce ideas of pupil empowerment. This is their project, what do they want to do with it? All projects must be empowering, students have a role in the process of learning. They are researchers who will examine how plastic affects their island and how to improve it. The emphasis is on "What can I do?"

Preparations for the next sessions:

1. Creating invitations for the presentation event (session 7) for important islanders, parents etc. Who should be there? How can we invite them? (a letter, social media, emails, a poster?) The time, date and place of the meeting should have already been decided by the teacher, either as part of the travel to / hosting of the partner island or as a standalone event.
2. Work with pupils to organise a couple of fieldtrips, collect plastics on the coastline, sort it and discuss diverse groups of plastic. (depending on the capacity and budget of your school)

## Session 2: Exploring your island

### General description:

Pupils travel “back” to their own island. In doing so, the pupils will explore the culture, history, geography and language of their own island.

### Learning outcomes:

At the end of this session, pupils are able to:

- Use their own knowledge about their island and supplement this with research, thinking about what details are interesting for someone who hasn't visited their island.
- Present their island to someone who hasn't been there before, including the cultural, geographic and historical features that make it unique.
- Present basic information about their island in English.

### Materials needed:

1. Access to research material on the island (library books, knowledge of teachers and parents if they have time to engage, internet sources)
2. Depending on how the pupils choose to present their island, access to smartphones/tablets for filming, cameras for taking photos, computers/tablets for making a presentation, or paper materials for creating an analogue display about the island.

### Structure and activities:

#### Warmup

Pupils will recap what they remember about the topic of ocean plastics from session one. They are reminded that they will be working with pupils from another island on the topic, so they need to be able to present their own island to them.

#### Group brainstorm

The teacher asks the pupils what they think is interesting about their island for someone who has never been there and maybe hasn't even heard of it before. What would they want to show a visitor to their island? What makes their island special? If the discussion gets stuck, the teacher asks the pupils what they're curious about on their partner island – that's probably also what the pupils there want to know about your island!

#### Choice of medium

Depending on what materials are available, teachers can make a preselection in this. Pupils decide how they want to present their island to the other school – a film? A presentation? An interactive map? A display? They should bear in mind that they'll have

to present it virtually. This can be done in smaller groups if the class is larger, either with each group presenting a certain aspect of the island or with each group presenting the island in a different way.

### **Planning and research**

Each group of pupils makes a plan for their presentation and researches some facts on whatever they're presenting about the island. They then make a plan for gathering everything they need – going out and taking photos, filming, finding photos online etc. This can take as much time as the teacher is able to allocate.

### **Making the final products**

The groups then make their final products – creating the display board, editing their film, etc. Teachers can help with the technical elements of this if they're able to support. This may take a lot of time so an additional session exclusively for this purpose may be needed.

### **Feedback and wrap-up:**

At the end of the session, pupils present their final products to each other – they can choose to do this in English to practice ready for showing their work to their partner school in session 4. They reflect on the new things they've learnt about the island and if they've started to see anything differently now that they have to explain it to someone else.

As a link to session 3, teachers can ask pupils if they noticed anything to do with ocean plastics when they were doing their research.



## Session 3: Plastics on your island

### General description:

Pupils do research on how plastics affect their own island – the aim for this session is to gather as much information as possible by exploring their island. They'll be sorting and refining this information in session 5.

### Learning outcomes:

- At the end of this session, pupils can:
- Use their research about their island from previous sessions in order to add the local problem with plastics.
- Identify the challenges around ocean plastics affecting their own island.
- Present local plastic problems in relation to the global problem related to plastics.
- Do research in various ways, including field research and talking to members of the island community (interviews)
- Present an overview of the information they have found

### Materials needed:

- Access to research material on the island (library books, knowledge of teachers and parents, internet sources)
- Access to key people and places on the island (beach, harbour, hotels, restaurants, local government, local environment organisation etc.)
- Laptop with a stable connection and a camera (recommended if possible)
- Camera or cell phone to register information (recommended if possible)
- PowerPoint/Keynote/etc.
- Ice-breaker game
- Clear Instructions to conduct interviews

### Structure and activities:

#### Warmup

Pupils will recap what they remember about the topic of ocean plastics from session one, plus whether they already spotted anything to do with ocean plastics in their session 2 explorations. Were there any places or people they associate with ocean plastics?

Warming up for session 3 can be done for example by means of a word cloud on the board.

#### Preparation:

Students analyse the situation on the island. They think about the main people involved in the issue, they do research on plastic generation, use and waste on their island. They organise the way they want to do research on plastics. If possible, they can do interviews,

organise a roundtable and/or a field visit to a different location on the island.

The teacher can choose to help this discussion by preparing a number of places and people in advance (for example the beach, the harbour, the hotel(s), the restaurant(s), the nature protection organisation) and even set up some meetings with interesting islanders for the pupils to talk to. (NOTE: If pupils are not able to leave the school premises due to school policy, these islanders can be invited to the school for the information gathering.)

The teacher then forms groups, each who will be going to find information from a different person or place – teachers can choose to do this based on topic or based on geography, in which case a map of the island with the places on it would be helpful.

### **Research and field campaign**

Pupils perform the plan they have already decided and register all the information related to plastics at their island. They can record all the information on the camera or cell phone to use it afterwards.

This can take as long as the teacher is able to allow, and as independently as the teacher is able to allow. This will be different on different islands and with different age groups.

### **Collecting information**

Pupils return from their information gathering missions and put all of the information they've found together in the designated physical or digital place, making sure to label where they found it and what it is. This information will be very important for the information sorting activities in session 4. If this is being done digitally, pupils can take photos of objects they've collected to be uploaded to the digital whiteboard.

Making the final products

If time constraints allow, the groups then make their final products – creating the display board, editing their film, etc. Teachers can help with the technical elements of this if they're able to support.

### **Feedback and wrap-up:**

At the end of the session, pupils present their final products to each other – they can choose to do this in English to practice and be prepared to show their work to their partner school in session 4. They reflect on the new things they've learnt about the plastic on the island: Did they meet someone from the island they've never spoken to before? Did they find something unexpected? Did they go to a new place on the island?

If time constraints prevented them from preparing a final product, pupils gather round the table/whiteboard and reflect on their information gathering as a group.

As a link to session 5, the teacher asks the students what they think of the information they've gathered. Is it easy to use like it is? In one of the coming sessions they will work together to sort through all the information and choose the main challenges to work on, but first they'll meet the pupils from their partner island.

## Session 4: Get to know your partner island

### General description:

This time, pupils “travel” virtually to their partner island and learn about its culture, history, geography and language, etc.

### Learning outcomes:

At the end of this session, pupils are able to:

- Name different aspects of arts/history/geography/etc. of the partner island

### Materials needed:

- Laptop with a stable connection and a camera
- Zoom/MS Teams/Google Meet/etc.
- PowerPoint/Keynote/etc.
- Game to assign pupils in groups
- Ice-breaker game

### Structure and activities:

#### Preparation:

Students have prepared a presentation about their own island, its culture, history and interesting things they find important to include during session 2. The students can choose to do the presentation in any creative form they prefer. It can be a film, a PowerPoint presentation, a poetry piece or any other that pupils and teachers agree to. The goal is to let the pupils feel like they are in charge of the project. Pupils add information about plastic from session 3 to their presentations.

If time is available, rehearsals can be arranged for the teacher to assess the form and the contents of the presentation. Teachers from both schools agree on the day and time when the presentations will be shown.

#### The presentations:

On a day and time, which is agreed by both schools, the two groups of pupils connect with each other through the means of a video call. During it, the students present their presentations to each other and answer any relevant questions both from teachers and pupils.

After the presentations, the teacher makes mixed groups of students for future work. A game can be used to assign pupils in different groups.

#### After the presentations:

When the groups are created, the teacher helps the students find a stable medium for

communication and an ice-breaker game to get the conversation started.

### **Feedback and wrap-up:**

Session 5 is assessed by the confidence the pupils and teachers have about their knowledge about the other island. The pupils reflect on their presentations and the presentations of the fellow island.



## Session 5: Choosing a challenge

### General description:

This time, pupils use the information of previous sessions and brainstorm the main problems their island has regarding plastics. They have a list of problems/challenges that they then work on together in sessions 6 and 7.

### Learning outcomes:

At the end of this session, pupils can:

- discuss the most important problems for the island regarding plastics.
- present and engage in addressing the challenges to be solved by the participants

### Materials needed:

- Laptop with a stable connection and a camera
- PowerPoint/Keynote/etc.
- Ice-breaker game

### Structure and activities:

#### Analysis:

Students analyse all the information they have obtained during the previous sessions. They analyse the problem in a creative way, preferably very visually and collaboratively. Make full use of whiteboards, large sheets of paper, mapping... whatever works best in your context.

#### Focus and challenge

Pupils work together to create a list of problems regarding plastics in their island. They formulate at least 4 specific challenges in the form “How can we ...?” The pupils can use the triple voting to rank the most important challenges:

- Which are the most Important challenges for the island?
- Which of the challenges can obtain a more innovative solution?
- Which of the challenges can have the most impactful solution on the island?

#### Making the final products

The pupils split into groups, each working on one of the most important challenges. The groups make their final definition of the problems, adding all of the information they collected that could be interesting for the team solving that problem from the information they've found during the past weeks. These challenge 'dossiers' will be the basis for the next weeks.



**Feedback and wrap-up:**

Each group presents their dossier and see if there's any information that other groups have which they could add. They work together to make sure they know some of the most important words for each challenge in English.



## Session 6: Working together

If the funding is available, students visit the partner island and sessions 6 and 7 take place during that visit. If not, this can be facilitated digitally and sessions 6 and 7 then take place over a longer period. See section above on the programme flow for more information.

### General description:

While visiting the partner island or in a facilitated online setting if travel is not possible, pupils work in groups to find and build a solution for their island's challenges. They work in groups formed by students from both schools and find creative solutions for the challenges.

Pupils "pitch" their solutions to each other and winning ideas are identified (or one winning idea, depending on how many groups there are). At the end of the session, pupils have already identified various solutions, explaining why they think these solutions would fit their school and their island. Pupils will evaluate each solution with the guidance of their teacher/facilitator and they will try to think of ways of implementing it.

### Learning outcomes:

At the end of this session, pupils can:

Evaluate the resources/material collected

Perform brainstorming activities

Organise ideas and propose solutions

- Identify which solution fits their partner island the most
- Negotiate and discuss with peers
- Respect the democratic process in the framework of which a final decision has been made
- Strengthen their soft skills, such as critical thinking, problem solving, creativity and collaboration, empathy (students put themselves in their peers' shoes)

### Materials needed:

- Laptop with a stable connection and a camera
- Zoom/MS Teams/Google Meet/etc.
- PowerPoint/Keynote/etc.
- Ice-breaker game
- Brainstorming canvas
- a presentation template for sharing their ideas to the partner island's peers, maybe in Trello (a collaboration tool that organizes your projects into boards)

### Structure and activities:

#### Preparation:

- Students have already introduced their school and island to their peers from the partner school during week 4.
- The facilitators, one per school (could be 2 students assigned by their teachers) are distributing tasks

- some students will search on the internet
- some students will start preparing the video
- some students will find an engaging presentation template
- Students meet and create a good atmosphere for working. It is important to create a safe space for the students to communicate and share their own ideas confidently. Teachers can use a game as an ice-breaker for the group:

Option 1: Teacher asks the students to write usages for a belt in one minute. After, the students discuss how many usages they have imagine and how these solutions are creative.

Option 2: Teacher asks repeatedly to draw a house in a paper, normally 8 times. After that, students reflect on which houses are crazier and if there was a moment of creative disruption.

### **Brainstorming**

Each group use between 45-60 min to brainstorm solutions for their respective challenges. The main steps for the brainstorming activity are:

1. Open brainstorming: Each group propose as many solutions as possible. It is not time to judge them, the more ideas the better. It is an individual activity, but it must be transparent for the rest of the group, using a collaborative board (mural, miro or Padlet Tools) or a shared file (google drive or similar).
2. Teamstorming: Students together and brief the rest of the team with what they have done so far. The facilitator provides some guidelines in order not to lose time and work on concrete results. They improve the material by brainstorming and sharing their feedback. These activities can be:
  - Impersonate: Imagine you are another person and ask the participants to answer the challenge as this person would do. You can use different examples: your mayor, your mother, Ghandi, Greta Thunberg,...
  - Collaborate: Ask to exaggerate, combine, reverse ideas of the other participants.
  - Exchange: Ask one group to brainstorm the other ones. You have fresh ideas from other people in the module.

### **Organising the ideas:**

The students organise the ideas using a matrix with two axes: innovation and feasibility. The ideas could be clustered in possible and emergent solutions.

They all meet again and present their final draft, while the rest of the team is listening and paying attention to the final result and they debate in order to conclude.

### **Value proposition**

The students end up the session by selecting their solution among the different clusters identified in the process. Additionally, they build a solution. "Building a solution" doesn't per se indicate a physical thing. Students can work on an ad campaign, present a prototype of a machine they created, or make a film talking about how a community can solve the problem. They all rehearse on their assignment and they work on corrective actions.

### **Feedback and wrap-up:**

After preparing all these, students present their work to the rest of the school, both students and teachers, so as to collect feedback and resolve any vague aspects.

## Session 7: Sharing the solution

### General description:

Pupils share the solutions they've created with important people from the island community – parents, politicians and islanders that can be part of their solution. This is also the opportunity to share the project more widely with the rest of the school.

Note: The date of this session should be decided at the start of the process when you're working with your fellow teacher from the partner school. If you're physically travelling or hosting, this moment falls at the end of the trip and is the chance to connect your work with the rest of the school and the island community.

### Learning outcomes:

At the end of this session, pupils are able to:

- take the initiative in acquiring information to examine a selected issue from different perspectives,
- discuss the importance of cooperation in coordinated actions concerning their own environment,
- form an opinion on environmental issues that concern their local community by holding a meeting, evaluating different challenges and possibilities when it comes to plastic pollution.
- analyse the state of their own surroundings and preceding events, and then organise participation of stakeholders in actions that lead to improvements,
- take part in and explain their experience and the outcome of participation in activities concerning nature, plastic pollution, and society,
- adopt and present/argue a well-founded stance toward issues and make written and oral proposals on how to react to changes, but, at the same time, take into consideration that in the future many things are uncertain and complicated

### Materials needed:

- computers/phones
- contact information/social media
- presentation materials
- space to host a meeting
- microphones, chairs and tables

## Structure and activities:

### Preparing the meeting

Pupils prepare a meeting with the rest of the school, islanders, and local government and other relevant organisations. This way also it becomes a moment of celebration for the pupils. This could be a session with the mayor or something along those lines, done in a child friendly manner.

The invitations should have already been sent out as part of the wrap-up activities of session 1. Based on the work they've done in the past sessions, students plan for the meeting in the group with the teacher:

- How to present the project and their partner school
- How to present the solutions they've come up with
- Questions to ask the audience about their work so that they have some feedback
- How to introduce sustainability in a fun way? Is there food from the island they could prepare, or an art display make with found plastics?

They then work in smaller groups on the different parts of the meeting and the presentation. They've already presented their work to each other and to the pupils from the other island school, so they can use lots of the material again!

During the meeting

- Pupils introduce/present the project and their results, challenges and possible solutions
- Pupils call for feedback, ideas and perspectives from the meeting concerning future actions

### Feedback and wrap-up:

After the meeting has finished, a group discussion with the pupils on how they experienced it. What was it like talking to grownups about their ideas? How was it being on stage or presenting? What went really well? What could have gone better?

## Session 8: Looking back, looking forward

### General description:

In the final session the pupils look back at the past sessions and then look forward, imagining a future scenario for their island. They do this using the backcasting method, which is explained in more detail below. If you've travelled as part of the programme, this session takes place when you're back on your home island.

### Learning outcomes:

At the end of this session, pupils are able to:

- Reflect on the work they've done over the past sessions, thinking about what went well and what didn't go quite so well.
- Imagine future scenarios for their island and make the first steps in thinking about how to reach that scenario.

### Materials needed:

- Paper and pens
- Art supplies
- Printer and computer for photos
- Whatever you have to hand

### Structure and activities:

#### Looking back

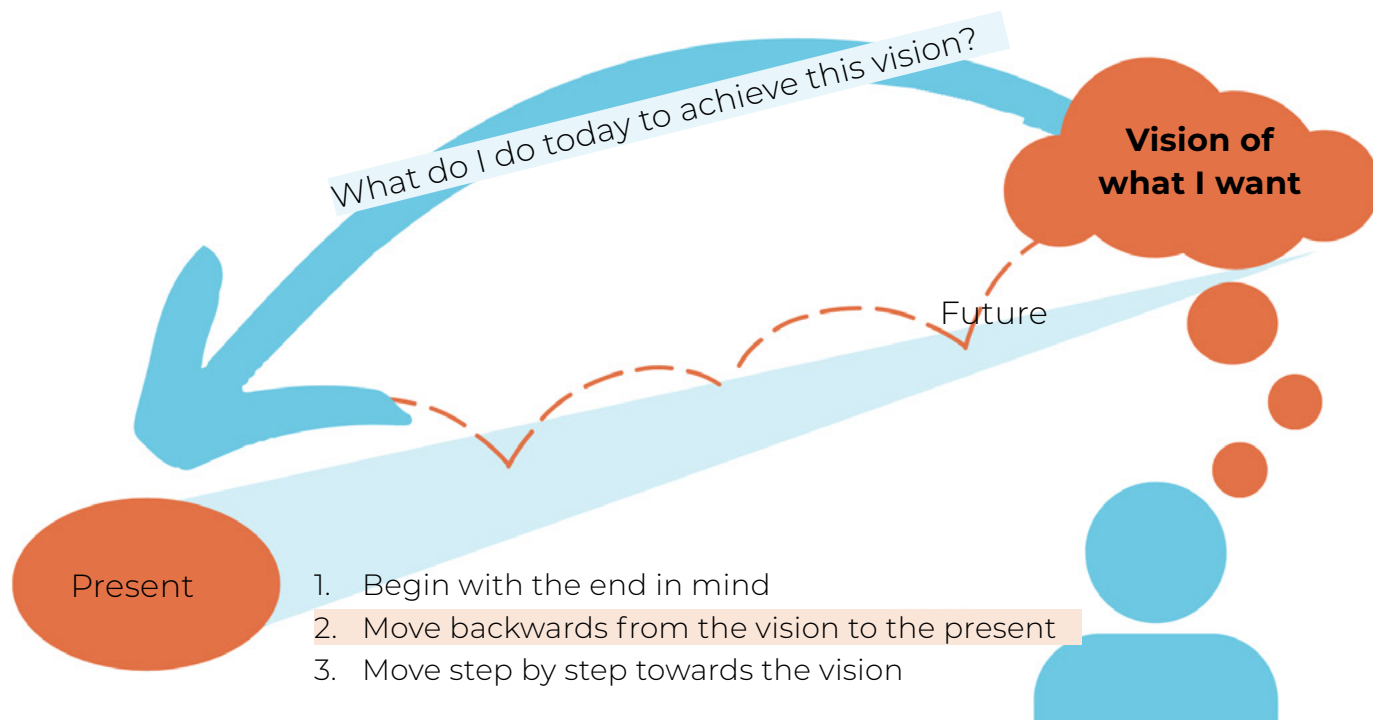
The first part of the lesson is a group discussion looking back at the past sessions and talking about pupils' impressions. What have they learnt? What did they like? Do they look at their own island differently? How was it working with children from another island? What was it like to share their ideas with other islanders?

To conclude this discussion, pupils can create something which they can hang up in the school as a reminder of the programme. This is particularly nice to do if you've travelled or hosted as part of the project. For example, a poster or a photo collage.

#### Looking forward

The pupils have learnt a lot about sustainability and about their island. They've also come into contact with another island and learnt about how things work there. To get the discussion flowing, ask the pupils about the similarities and differences between the two islands. What did they like more about the other island? What is better on there island?

Now it's time to start backcasting. Backcasting is a method used in future studies whereby you imagine a dream scenario in the future (for example 10, 20 or 30 years in the future) and then work backwards to think about how you could get there. In our case, we'll be imagining how we want our island to be in the future. If your group worked well with the SDGs, you can bring them up again as an example – the SDGs describe what we'd like our world to be like in



2030 and how we can work to get there.

Either as a whole class or in smaller groups, depending on size, ask the pupils to imagine how their island should be in 20 years. A nice way of doing this visually is to draw a map of the island which can be added to. At the start of the process there are no ideas too crazy for the future.

Once there are a number of ideas generated, start asking questions which bring in more ideas of sustainable development. Who lives on the island in 20 years? What do they do for work? What's it like to be a child on the future island? How is the natural environment on the future island? How would animals experience the future island? How do you travel to and from the future island? Are there any plastics on the future island? If so, what are they used for? If not, what are they using instead?

Try to reach a consensus on what the future island is like. If you've been working with multiple groups, bring their ideas together into one future island that the whole group is excited about. Then choose the idea the group is most excited about. How is that different from the island now? What would have to change to make that idea happen? And, based on the previous session, who on their island could help them make it happen?

To conclude this discussion, finalise the map of the future island as a poster with a timeline of how to reach the future island. This will return next year in the second year of the Island Schools programme, so hang it up or keep it safe!

### **Feedback and wrap-up:**

To wrap up the lesson, ask the pupils how they felt working on the future island. Was it difficult to imagine a future island? Are there things from their partner island that they included in their future island?

Ask the pupils to remember their future island scenario, because next year they'll be returning to it.

As an optional extension, preferably as an additional session, you can work with the partner school to present the future islands to one another digitally. You can also have a live vote (using a video calling service plus, for example, Mentimeter) to decide which topic the pupils would like to work on in year two of the Island Schools programme: sustainable transport or sustainable tourism.





### Additional resources

Below you'll find some additional resources that can be used, arranged by topic. Feel free to supplement these with your own resources. Do you have resources you'd like to share? Get in touch, we're always updating our teacher packs!

#### Brainstorming and ideation

[Visual toolbox for system innovation | Climate-KIC](#)

[Brainstorming in teaching | UNSW](#)

[Miro](#)

[Jamboard | Google](#)

#### Exploring your island

[My maps | Google](#)

#### Icebreakers and group dynamics

[Elementary school icebreakers | We Are Teachers](#)

#### Ocean plastics

[Facts about ocean plastic pollution | Kids Earth.Org](#)

[Plastic in the ocean | National Geographic Kids](#)

[Blue Planet clip on plastic in our oceans | BBC](#)

[Plastic Ocean | United Nations](#)

[What really happens to the plastic you throw away | Ted-Ed](#)

[A brief history of plastic | Ted-Ed](#)

[Kinderen verzamelen superveel aangespoelde dingen | NOS Jeugdjournaal](#)

#### Remote connection between pupils

[Zoom](#)

[Microsoft Teams | Microsoft](#)

[Google Meet | Google](#)

[Miro](#)

[Jamboard | Google](#)

#### SDGs

[Resources for introducing the SDGs into teaching | World's Largest Lesson](#)

[Sustainable Development Goals | Unicef](#)

[Sustainable Development Goals Overview | Unicef](#)

[Child Friendly SDGs | United Nations](#)

[SDGs for early years | Montessori Europe](#)

[The 17 Goals | United Nations](#)

#### Video and presentations

[Mentimeter](#)

[Canva](#)

[Prezi](#)

[Adobe Express | Adobe](#)

#### Voting and discussing

[Mentimeter](#)

[Miro](#)

[Jamboard | Google](#)





# MSC ZOE

## One Year later

On the night of 1 to 2 January 2019, things went wrong over the Dutch Wadden Islands. The container ship the MSC Zoë lost 345 containers, which washed ashore on Vlieland, Terschelling, Ameland and Schiermonnikoog. What factors played a role in the containers being lost over the islands? And what all was washed ashore?

What was the consequence for Vlieland?

### Cruising routes

The MSC Zoë had left Portugal in late December 2018 and was on its way to Bremerhaven in Germany. While the first part of the voyage was calm, on the night of 1 to 2 January, things went wrong over the Dutch Wadden Islands.

Due to time constraints, MSC Zoë chose the fastest sailing route over the Dutch islands. This is because two shipping routes run there. These are called the Northern and Southern sailing routes. The Northern route is deeper in terms of draught, but has a longer sailing time to get to Bremerhaven. The Southern route is thus faster, but involves hazards.

The MSC Zoe took the southern route on the night of 1 to 2 January. The ship

was due to report to Bremerhaven at the appointed time for the unloading the containers. Due to the north-westerly storm with gusts up to wind force 8 booms. And high waves of 10 metres, the ship turned sideways. The MSC Zoe was listing, with the ship 'falling' to one side, from 30 to 35%. As a result, at times the ship obtained a draft of 12.5 to 15 metres. The channel of the southern shipping lane above the Wadden Islands has a draught of up to 20 metres. In all probability, the ship touched the bottom, causing the containers to become loose.

### Sea container

In 1966, the container was invented by Malcolm McLean. The American thought that transporting goods could be made more efficient by using containers of the same size (20 ft or 40 ft), instead of transporting goods loose in the hold of a ship. It has also been called the invention of the century. Because standard sizes are used, the containers can be used on ocean-going vessels as well as trains, trucks, barges and cranes.

In the Netherlands, imports and exports of goods by sea have increased substantially over the past 20 years. In this, imports of wet bulk, such as petroleum, remain the largest. But imports and exports via containers also show an increase. In 2018, some 65 million tonnes of goods were landed in containers at Dutch seaports. Total arrivals of goods at Dutch seaports stood at 605 million tonnes in 2018.

The Netherlands imports a lot from Germany, China, Belgium, the United States and the United Kingdom. But exports more inside Europe, to countries such as Germany, Belgium, UK and France.

#### Washed ashore

The MSC Zoë lost 345 containers as a result. Many of the containers ended up on the bottom of the North Sea, but some also washed up on the Wadden Islands. Most of the containers, 200 of them, ended up in the sea above Terschelling. Six of them ended up on the island's beach.

Three containers washed ashore on Vlieland. In addition, the beach dotted with chairs as far as the eye could see. The otherwise empty beach lay suddenly filled with chairs, slats from slatted beds, fleece rugs, children's coats and lots of plastic



Immediately on 2 January, work started on clearing the beach. Via Twitter and Facebook, the municipality issued an appeal for people to come and help. On Vlieland, clean-up operations were held for 2 days. This involved the police, fire brigade, Staatsbosbeheer, beachcombers, islanders and bathers.

Actions were held with the washed-up items. For instance, many islanders washed the children's jackets, which are sold to raise money for stray dogs. The fleece rugs can be printed into Jut rugs. But most of the washed-up material was collected and destroyed as it washed ashore broken and soaked.

#### And now?

At the end of 2019, almost a year later, some containers and goods have still not been cleared. Almost 300 containers or parts of them have been cleared.

The counter stands at 2.42 million kilos of stuff fished out of the sea, out of a total of 3.26 million kilos. The clean-up has so far cost 35 million euros. The government wants the shipping company to pay the costs. Future costs are still being negotiated. If no agreements are reached, legal action will follow.

Nynke Bruinsma (2020)



## Grid for use making island maps

ISLAND  
SCHOOLS





Grid for use during session 6



More Original

Less Original

Difficult to make happen





Easy to make happen



Erasmus+