

Templates and guidance to develop blue-school projects

Last updated: April 2025



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UK participants in Horizon Europe Project ProBleu [101113001] are supported by UKRI grant numbers: 10082336 Earthwatch Europe, 10081234 Plymouth Marine Laboratory and 10082355 Ocean Conservation Trust.

This document is designed to help teachers prepare a ProBleu project for the 4th funding call [<https://probleu.school/probleu-funding-calls/>], and become a member of the Network of European Blue Schools (NEBS).

If you need any further assistance, please contact us by email or get in touch with us through our social media before **20th May 2025**. We cannot guarantee that emails related to the 4th funding call will be answered after this date.

Info sessions will be held to clarify any doubts about the ProBleu call. Click the links below to register:

- [9th April at 10:00 CET](#)
- [16th April at 10:00 CET](#)
- [7th May at 10:00 CET](#)

- Email: probleucall@probleu.school
- Website: <https://probleu.school/>
- LinkedIn: <https://www.linkedin.com/company/probleu-project/>
- Facebook: <https://www.facebook.com/profile.php?id=100095504382672>
- Instagram: <https://www.instagram.com/probleu.schools/>
- Twitter: https://twitter.com/pro_bleu

If the deadline for the 4th ProBleu funding call has passed, but you're interested in becoming a member of the Network of European Blue Schools, the tools in this document may still be helpful.

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1. Introduction to the Blue School project

The Network of European Blue Schools (NEBS) is an initiative established under the EU4Ocean Coalition for Ocean Literacy to promote ocean and freshwater literacy among schools. The NEBS strives to create a more ocean-conscious society by encouraging collaboration between schools and ocean professionals and facilitating the sharing of experiences and resources.

1.1. Applying through NEBS

The European Blue School initiative is open to all schools within the European Union and [countries associated with Horizon Europe](#). These schools can apply to receive the certification and can take part in the online European Blue School Community. The application form is only available in English and must be filled out in English. Your project must be ongoing or already finished. Applications submitted in languages other than English or for projects that have not started before the application period will not be considered. You need an EU login to complete the application form.

Applications are open twice a year: from September to December and from January to May. They are reviewed by the European Blue Schools coordinating team. After the evaluation period, you will be informed of the results via email. Applications are reviewed at the beginning of each month: October, November, December, February, March, and April, with a final assessment after the deadlines (December 15th and May 31st). During the evaluation process, teachers may be contacted for additional information. Following the evaluation, teachers will receive the results via email. If approved, the European Blue School Certificate will be issued for the current school year. If declined, the project can be modified to meet the requirements and resubmitted.

Link to application: https://maritime-forum.ec.europa.eu/theme/ocean-literacy-and-blue-skills/ocean-literacy/network-blue-schools/become-european-blue-school_en

1.2. Applying through ProBleu

The ProBleu funding scheme supports primary and secondary schools in working with children, youth, and the wider school community in the education on the sustainability and protection of marine and freshwater ecosystems. ProBleu supports schools by providing funding for ocean and freshwater literacy projects. Projects should engage students, teachers, school leaders and the wider school community in pursuing ocean and water literacy and sustainability. Schools are expected to develop and implement ideas that contribute to achieving the objectives of the Mission "Restore our ocean and waters by 2030". Importantly, it is a mechanism to become a member of the Network of European Blue Schools (NEBS), contributing to the work of the EU4Ocean Coalition.

You are eligible to be a part of NEBS if you receive ProBleu funding and demonstrate that the proposed project has started. The application process for NEBS has been streamlined by ProBleu. Schools funded by ProBleu will automatically be accredited as a Blue Schools and will not need to apply to NEBS separately.

Link to the funding call: <https://probleu.school/probleu-funding-calls/>

2. Planning your Blue School project

This [brainstorming worksheet](#) is a tool designed to help schools applying for ProBleu funding. It provides structured support across key areas, including project topic selection, activity planning, inclusivity, and project management, ensuring alignment with NEBS principles and fostering the development of impactful Blue School projects.

There are 4 pages in this worksheet to help you generate ideas for your project:

- Selecting a project topic
- Selecting project activities
- Including all students
- Making a project plan

While using the brainstorming worksheet provided is not a requirement for preparing ProBleu application, it is designed to aid those who might find the structure provided useful. To utilise the worksheet effectively, you can [download it](#) and, if preferred, print it out. This sheet is meant for rough use and allows you to organise potential ideas in a structured manner, covering all the relevant questions in the ProBleu application.

! Reminder ! The brainstorming worksheet is NOT the same as the ProBleu application; it is just a tool to help you develop your project ideas. To apply for ProBleu funding you will still need to complete the application form available from the ProBleu website:




<https://probleu.school/probleu-funding-calls/>

You can see guidance on how the sections of the brainstorming worksheet match with the ProBleu application in Section 2.1 below.


2.1. Mapping your project to the application

The following figures allow you to visualise where certain sections of the 'Project brainstorming worksheet' will be relevant when filling out the 'Project description' as part of your ProBleu application. The main images are screenshots from the 'Project brainstorming worksheet' whilst the blue arrows and text are the corresponding section in the ProBleu funding application.

| PROJECT BRAINSTORMING WORKSHEET | | ProBleu |
|---|--|--|
| PICKING A PROJECT TOPIC | | |
| What is the nearest river, lake, estuary, coastal area or body of water to your school? | | |
| What are some water-related challenges your community or the selected water body faces (e.g., water pollution, habitat degradation, overfishing)? | Are there any local organisations working on water conservation, pollution prevention, or marine life protection? Can you partner with local organisations working on water-related initiatives? | <p>→ 3.1.3. Other stakeholders and groups:</p> <p><i>Guidelines: Please describe if you will involve the wider school community in your project and how (for example families, other students, teachers, companies, public authorities, NGOs). [Maximum 1000 characters, including spaces]</i></p> |
| <ol style="list-style-type: none"> 1. The European Ocean Coalition (EU4Ocean) - each European is a citizen of our ocean and waters 2. Open access data on marine and freshwater 3. Protected waters 4. Using ecosystem-based services and nature-based solutions to protect the coast and seas 5. De-damming European rivers 6. Ending destructive fishing practices, e.g. overfishing 7. Removing single-use plastic / generate zero plastic litter 8. Reduce pesticides in seas and waters 9. Reduce micro pollution - zero spill 10. Reduce underwater noise pollution 11. Reduce CO2 emissions from the shipping sector 12. Promoting renewable ocean energy 13. Eat less fish, more algae - zero-carbon aquaculture 14. Create blue biotechnology 15. Carbon neutral marinas 16. Ocean and water governance 17. Biodiversity beyond national jurisdiction | How can your project contribute to achieving these goals/Mission 2030? (your project can contribute to more than | <p>→ 4. Relation with European initiatives</p> <p><i>This section includes information to evaluate your application under Dimension 3. Criteria defined by the Horizon call (check the Chapter 6 of the Call for Proposals, to see what is evaluated under this dimension).</i></p> <p><i>4.1. How will your project contribute to the Mission "Restore our Ocean and Waters by 2030"?</i></p> <p><i>Guidelines: Considering the topics you identified in the online application and in question 2.2. in this form, explain how the results of your project will contribute to the mission objectives. [Maximum 1000 characters, including spaces]</i></p> |
| What are the ocean and freshwater activities currently being done at your school? (To help identify how new ideas can build on existing efforts) | | |

| PROJECT BRAINSTORMING WORKSHEET | |  |
|--|--|--|
| CHOOSING PROJECT ACTIVITIES | | |
| <p>Can you develop creative projects that combine different subjects?</p> <p style="text-align: right;"></p> <p><i>3.4. What will happen with the results of your project?</i></p> <p><i>3.4.1. How will the results or activities of your project be incorporated in the curriculum or plan of activities of the school?</i></p> <p><small><u>Guidelines:</u> Please describe in which subjects or other activities of the school the results will be used in the future. Describe how these results will be available to teachers, students and other members of the school community. [Maximum 1000 characters, including spaces]</small></p> | <ul style="list-style-type: none"> • Organise a school cleanup event for a local water body. • Raise awareness about the importance of responsible waste disposal to prevent water pollution. • Design a plan to restore a local habitat (e.g., planting native vegetation along a riverbank, algaculture garden). • Research a water-related policy issue impacting your community (e.g., water conservation measures, sustainable fishing practices). Organize a campaign to raise awareness and advocate for change. | |
| <p>Student Interests</p> | <p>How can you integrate ocean and water literacy concepts into existing lessons?</p> <p style="text-align: right;"></p> <p><i>2.6. How do the activities and results proposed relate to the existing school curricula or activities?</i></p> <p><small><u>Guidelines:</u> Please explain how the activities proposed in your project relate to specific aspects of one or more subjects or to other activities already existing in your school. [Maximum 1000 characters, including spaces]</small></p> | <p>What are their existing interests in science, art, technology, or social justice?</p> |
| | <p>How can you use art, music, literature, or film to explore ocean and water themes?</p> | <ul style="list-style-type: none"> • Conduct water quality testing in your local waterbody. Partner with a local organisation to analyse your findings and identify potential solutions. • Citizen Science: Participate in a global citizen science program that collects data on ocean health (e.g., monitoring water quality, monitoring coastal biodiversity, tracking marine mammal populations). • Creative Expression: Organise an art or writing competition focused on raising awareness about ocean threats and inspiring solutions. • Partnerships: Connect with a school in a coastal community to learn about their challenges and collaborate on a joint project. |

PROJECT BRAINSTORMING WORKSHEET



INCLUDING ALL STUDENTS

How will you adapt this project for different learning styles and abilities?

3.2. How will you ensure that students have equal access to the activities of the project?

Guidelines: Please explain how and why the activities of your project are accessible to all types of students, regardless of gender, cultural background, or physical accessibility barriers, among others. If you envisage any special measures to ensure equal access, please explain them here. [\[Maximum 1000 characters, including spaces\]](#)

| | |
|---|--|
| exploration, citizen science projects, community action projects) | trips, guest speaker series, global connections) |
|---|--|

3.3. Will the project reach students with fewer opportunities?

Guidelines: Please see Annex 1 of the Call for Proposals for more information about participants with fewer opportunities.

No Yes [if yes, please select one or more of the following]:

| | | |
|---|--|---|
| <input type="checkbox"/> Disabilities | <input type="checkbox"/> Health problems | <input type="checkbox"/> Educational difficulties |
| <input type="checkbox"/> Cultural differences | <input type="checkbox"/> Social barriers | <input type="checkbox"/> Economic barriers |
| <input type="checkbox"/> Discrimination | <input type="checkbox"/> Geographic barriers | <input type="checkbox"/> Other |

3.3.1. If you replied "yes", please explain how the activities of the project will facilitate the access of people with fewer opportunities. [\[Maximum 1000 characters, including spaces\]](#)

Can you raise awareness about a specific ocean or water-related issue? How?

What educational materials or resources can you use?

How can you encourage sustainable practices within your school?

4.3. How does your project ensure that the activities proposed will have carbon neutrality?

Guidelines: Carbon neutrality means that your project (or even better, your school) will include actions to removing as much carbon dioxide (CO2) from the atmosphere as it is emitting. While planning your project, you can include concrete measures that will be implemented or designed to be implemented at the school level to reduce carbon footprint in any way or to combat other forms of pollution such as the use of plastic. [\[Maximum 1000 characters, including spaces\]](#)

What educational materials or resources can you create?

PROJECT BRAINSTORMING WORKSHEET

MAKING A PROJECT PLAN

2.3. How will you implement the activities? When will they take place? Who will be involved? What will happen?

Guidelines: Describe the main steps or phases of your project. This description should allow us to understand how the project will run, in which order, what will be done, and how long each phase will last. For example, you can have an initial phase to gather a team and plan activities in detail, then proceed with the implementation of activities or development of resources, then promote the results achieved, etc. Maximum 2000 characters, including spaces

Time line

Budget

| Expense type | |
|-------------------|--|
| Technology | |
| Resource material | |
| Travel | |
| | |
| | |
| | |

5. Budget summary

Please select the lump sum category of the financial support requested.

| | |
|-------------------------------------|-----------------------|
| Up to 2 500€ (small scale project) | <input type="radio"/> |
| Up to 5 000€ (medium scale project) | <input type="radio"/> |
| Up to 10 000€ (large scale project) | <input type="radio"/> |

Justify how the requested funding will be used to carry out the project activities.

Guidelines: Please refer to the financial provisions in the Call for Proposals, namely the types of eligible costs. You can provide a list of the main costs the project will incur (in line with the activities and plan described in section 2) and for which you are requesting the financial support Maximum 1000 characters, including spaces

3. Connecting with external organisations

Collaborating with external organisations is a requirement that will significantly enhance your Blue School project. By connecting with interested parties and actors in your community, you can access valuable resources, expertise, and support.

- **Universities:** Research universities with marine science, environmental studies, or education departments. Consider departments that specialise in outreach or community engagement. Connect with universities, colleges, or research institutes in your area.
- **Local NGOs:** Identify organisations focused on environmental conservation, marine life protection, or community development.
- **PTAs (Parent-Teacher Associations):** Engage with your school's PTA to involve parents and the wider community in the project. Identify parents who are involved in the interested topics who can provide support to the project.
- **Community Groups:** Explore local groups interested in environmental issues, such as fishing associations, coastal communities, or water sports clubs.
- **Volunteer Groups:** Seek out individuals or groups passionate about marine conservation who can contribute their time and skills.
- **Local Government:** Explore collaborations with city councils, environmental agencies, or tourism boards.

You may consider utilising platforms such as LinkedIn, Twitter, and Facebook to build relationships with potential partners. Making use of online directories and databases to identify relevant organisations can be a valuable strategy. Engaging with online communities to identify potential collaborators is also highly recommended. Attending local conferences, workshops, or community events will allow you to connect with potential partners and seek out organisations with similar goals and values. Additionally, it's suggested to proactively reach out to potential partners via email or phone calls. It would also be beneficial to look for potential partners within your school's network and expand on existing collaborations to foster new opportunities.

When reaching out to potential partners, clearly define your project goals and objectives. Find common ground between your school and potential partners. Highlight how the partnership can benefit both parties. Maintain regular communication and foster a collaborative relationship. Consider creating partnership agreements to outline roles, responsibilities, and expectations.

The following email template serves as an example for reaching out to external parties to seek support for your project.

Dear [Recipient Name],

I hope this email finds you well.

My name is [Your Name], and I am the [Your Position] at [School Name]. We are excited to be embarking on a Blue School project to enhance our students' understanding of marine and water environments.

Our project aims to [Briefly outline your project goals]. We believe that a partnership with [Organization's Name] would significantly enrich our students' learning experience and contribute to our shared environmental objectives.

[Organization's Name]'s expertise in [Specific area of expertise] aligns perfectly with our project goals. We are particularly interested in exploring opportunities for [Potential areas of collaboration, e.g., joint research, educational workshops, volunteer programs].

I would welcome the opportunity to discuss potential collaborations further and explore how we can work together to achieve our shared objectives. Please feel free to contact me at [Your Email] or [Your Phone Number] to arrange a convenient time to talk.

Thank you for your time and consideration.

Sincerely,

[Your Name]

[Your Position]

[School Name]

[School Contact Information]

4. Ensuring inclusivity in your project

Below we present a list of potential barriers that may configure a situation of “fewer opportunities” (adapted from the [Erasmus+ Guide 2023](#)) and strategies to adapt to the barriers. These are just ideas to consider. As a teacher, you may have children with diverse needs that require different care and attention. It is always recommended to do what is best for the students, be considerate of the situation, and adapt accordingly to participants with fewer opportunities.

| Barrier type | Strategies for adaptation |
|--|--|
| <p>Disabilities: This includes physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder someone’s full and effective participation in society on the same footing as others.</p> | <p>Accessibility: Ensure that all project activities and materials are accessible to individuals with disabilities. This may involve providing accommodations such as sign language interpreters, assistive technology, or accessible transportation.</p> <p>Inclusive learning: Design activities that cater to diverse learning styles and abilities. Incorporate hands-on experiences, visual aids, and opportunities for peer support.</p> |
| <p>Health problems: Barriers may result from health issues including severe illnesses, chronic diseases, or any other physical or mental health-related situation that prevents from participating in the programme.</p> | <p>Flexibility: Allow for flexibility in project requirements and deadlines to accommodate individuals with health issues.</p> <p>Support services: Connect participants with necessary support services, such as healthcare providers or counsellors.</p> |
| <p>Barriers linked to education and training systems: Individuals struggling to perform in education and training systems for various reasons, early school-leavers, NEETs (people not in education, employment or training) and low-skilled adults may face barriers. Although other factors may play a role, these educational difficulties mostly result from an educational system which creates structural limitations and/or does not fully consider the individual’s particular needs.</p> | <p>Bridging gaps: Offer preparatory courses or workshops to address educational disparities and help participants develop necessary skills.</p> <p>Mentorship: Provide mentorship opportunities to support individuals who may face challenges in educational settings.</p> |
| <p>Cultural differences: Cultural differences may represent significant barriers to learning in general, even more for people with a migrant or refugee background (especially newly arrived migrants), people belonging to</p> | <p>Culturally sensitive materials: Use culturally sensitive materials and examples in project activities.</p> <p>Language support: Offer language support services, such as translation or interpretation,</p> |

| | |
|--|--|
| <p>a national or ethnic minority, sign language users, people with linguistic adaptation and cultural inclusion difficulties, etc. Being exposed to foreign languages and cultural differences may limit the benefits of participation and even prevent potential participants from applying for support.</p> | <p>to help individuals from different cultural backgrounds participate effectively.</p> |
| <p>Social barriers: Social adjustment difficulties such as limited social competencies, anti-social or high-risk behaviours, (former) offenders, (former) drug or alcohol abusers, or social marginalisation may represent a barrier. Other social barriers can stem from family circumstances, for instance being the first in the family to access higher education or being a parent (especially a single parent), a caregiver, a breadwinner or an orphan, or having lived or currently living in institutional care.</p> | <p>Community building: Create a supportive and inclusive community atmosphere within the project. Encourage peer support and networking.</p> <p>Social skills development: Offer workshops or training on social skills to help individuals overcome social adjustment difficulties.</p> |
| <p>Economic barriers: Economic disadvantages like a low standard of living, low income, learners who need to work to support themselves, dependence on the social welfare system, long-term unemployment, precarious situations or poverty, being homeless, in debt or with financial problems, etc., may represent a barrier.</p> | <p>Financial assistance: Provide financial assistance or scholarships to help individuals overcome economic barriers.</p> |
| <p>Barriers linked to discrimination: discriminations linked to gender, age, ethnicity, religion, beliefs, sexual orientation, disability, or intersectional factors (a combination of two or several of the mentioned discrimination barriers).</p> | <p>Diversity and inclusion training: Provide training on diversity and inclusion to all project participants.</p> <p>Safe spaces: Create safe and inclusive spaces where everyone feels respected and valued.</p> |
| <p>Geographical barriers: Living in remote or rural areas, on small islands or in peripheral/outermost regions, in urban suburbs, in less serviced areas (limited public transport, poor facilities) or in less developed areas may constitute a barrier.</p> | <p>Remote participation: Explore options for remote participation, such as online activities or field trips to nearby locations.</p> <p>Transportation assistance: Provide transportation assistance or subsidies to help individuals from remote areas participate.</p> |

5. Internal sign-off template

This section of the handbook provides guidance on using the downloadable and editable presentation template to effectively gain internal sign-off for your ProBleu project proposal. Every school will have a different internal sign-off procedure. In some cases, teachers just informally discuss the project with their headteacher but in some schools a formal sign-off procedure has to be followed. You will know the situation in your own school.

If you have to follow a formal internal-sign-off procedure, we have developed a presentation template, which is designed to highlight key elements of your project and demonstrate its alignment with the ProBleu initiative's goals. The presentation should be adapted to your audience so feel free to edit all the content and delete slides you don't need. The presentation template can be downloaded using the following link: [Internal sign-off template.pptx](#)

Key sections of the presentation

1. **Title slide:** Customise the title with your project's specific name and tagline.
2. **Introduction:** Briefly introduce what ProBleu does and how it will help the school to become a part of the European Network of Blue Schools Network. This will give them an understanding of ProBleu and its aims.
3. **Eligibility:** Highlight your school's eligibility for funding by indicating the country it is in and possible collaboration opportunities with schools from other eligible countries (this could be particularly helpful for schools in non-EU member states who might assume they are not eligible for funding).
4. **Benefits of participating:** Explain the potential benefits of participating in the ProBleu funding initiative, such as increased visibility, professional development, and access to resources.
5. **Activities:** Outline the potential activities that can be done with ProBleu funding.
6. **Available funding:** Explain the funding options provided by ProBleu and the expenses it will cover.
7. **Project idea:** Clearly articulate the specific objectives of your project and their importance.
8. **Activities planned:** Outline the proposed activities for your project, ensuring they are aligned with the initiative's themes and objectives.
9. **Budget:** Clearly present the funding requirements and how the allocated funds will be used.
10. **Sustainability practices:** Emphasise the sustainability aspects of your project, demonstrating its alignment with the initiative's goals.
11. **Student participation:** Outline how the planned activities will be inclusive of all students and how you will ensure safety among them.
12. **Application process:** Explain the steps involved in applying for funding, including deadlines and requirements.
13. **Related projects:** Highlight relevant other funders that can provide additional context or support.
14. **Contact information:** Include contact details for the ProBleu initiative.

6. Ideas for writing a project on a specific subject aligned with the EU Mission on oceans and water

This section provides teachers with guidance on developing project ideas for their Blue School projects. Table 1 is divided into three columns: the third column highlights the Mission sub-targets, organised under broader targets aligned with the three official objectives of the EU Mission 'Restore Our Ocean and Waters.' These objectives direct efforts to sustainably manage marine and freshwater ecosystems (EU, 2024). Section 6.1 provides examples of projects funded by ProBleu providing educators with a clear understanding of the ideas that can be developed. Initially, D2.1 proposed three project ideas for each Mission sub-target, which have since been categorised by subject to improve usability for educators in section 6.2. The aim is to help teachers easily create comprehensive and impactful Blue School projects. It's important to recognise the shift from the 17 goals outlined in the 'Mission Starfish 2030' proposal to the three objectives now supported by EU Missions. While the 17 goals offered detailed guidance, they have been reorganised under the new framework for enhanced clarity, ensuring teachers can align their projects with the Mission's strategic objectives effectively.

Table 1 Alignment of Targets with Objectives of the EU Mission "Restore Our Ocean and Waters"

| Objective Number | Target | Sub-target |
|------------------|---|--|
| | 1: Each European is a citizen of our ocean and waters | 1.1: Literacy and knowledge about the water system are compulsory elements in all science curricula in primary and secondary schools throughout the EU |
| | | 1.2: 50 percent of Europeans have participated in events organised by the pan-European ocean literacy coalition (EU4Ocean) |
| | | 1.3: At least 50 percent of the European blue workforce has been upskilled or re-skilled |

| | | |
|--|--|--|
| Objective 1: Protect and Restore Marine and Freshwater Ecosystems and Biodiversity | 2: Marine and freshwater observation is streamlined and accessible to all via a digital twin of the ocean and all waters | 2.1: Global digital twin of all oceans and waters is operational |
| | | 2.2: Global marine and freshwater observation is streamlined: all data collected is pooled centrally and made accessible to all |
| | | 2.3: Global high-resolution ocean forecasting and regional ocean climate services are operational to support climate change adaptation at coastal scale |
| | | 2.4: The European seabed is fully and coherently mapped in high-resolution |
| | | 2.5: 50 percent of DNA of life in our ocean and waters is fully sequenced and publicly available |
| | 3: 30% of EU waters are highly to fully protected | 3.1: 30 percent of EU-waters are highly to fully protected, with concrete management plans and forming a network of MPAs co-managed by local communities |
| | | 3.2: Total water abstraction has decreased by 50 percent and groundwater abstraction has decreased by 20 percent |
| | 4: Active regeneration of 20% of degraded habitats | 4.1: 20 percent of degraded seabed habitats have been regenerated through removal of pressures, blue reforestation, ecological engineering and full ecosystem-based management of local activities |
| | | 4.2: Ecosystem-based services and nature-based solutions have been scaled up by at least 20 percent to improve resilience from sea level rise, floods and coastal erosion |

| | | |
|--|---|---|
| Objective 2: Prevent and Eliminate Pollution | 5: Renaturalise rivers and waters | 5.1: 30 percent of Europe’s rivers are re-dammed. |
| | | 5.2: 30 percent of surface water bodies suffering hydro-morphological pressures are restored |
| | 6: End overfishing | 6.1: The most destructive fishing practices like bottom trawling and other activities causing seabed habitat loss or degradation are phased out |
| | | 6.2: The level of incidental catches of protected and non-target species has decreased by 80 percent |
| | | 6.3: All catches are fully controlled at landing and all vessels above 12 metres are equipped with CCTV |
| | 10: Underwater noise is regulated and reduced | 10.1: Underwater acoustic emissions are reduced by at least 50 percent |
| | | 10.2: Noise impact mitigation measures have been defined in each European marine region and continental subaquatic environment |
| | 7: Zero plastic litter generation ¹ | 7.2: All single-use plastics are banned worldwide |
| | | 7.1: All plastics on the EU-market are reusable or recyclable |
| | 8: Eutrophication of European seas and waters is halted | 8.1: Losses of nutrients into the environment are reduced by at least 50 percent and the use of fertilisers is reduced by at least 20 percent |
| 8.2: Use and risk of chemical pesticides and the use of more hazardous pesticides is reduced by 50 percent | | |

¹ This target also comes under objective 1

| | | |
|---|--|---|
| | | 8.3: 100 percent of urban wastewater is subject to tertiary (advanced) treatment |
| | | 8.4: All waste waters from ships operating in the European waters is delivered to treatment plants on land |
| | 9: Zero spill | 9.1: 50 percent of ships operating in the EU are granted the EU Green shipping label |
| | | 9.2: Waste and container loss from the shipping sector operating in the EU is reduced by at least 75 percent |
| | | 9.3: All ports have facilities to receive waste and wastewaters from ships |
| | | 9.4: The release of micro-pollutants (pesticides, pharmaceuticals, biocides, PFASes) into wastewater treatment plants has been reduced by 50 percent |
| Objective 3: Make the Sustainable Blue Economy Carbon-Neutral and Circular | 11: Climate-neutral waterborne transport | 11.1: 100 percent of propulsion engines of leisure boats, fishing vessels and ferries and other short-sea shipping are converted to non-fossil propulsion |
| | | 11.2: CO2 emissions from the shipping sector operating in the EU are reduced by 45 percent |
| | | 11.3: 50 percent of vessels older than 20 years are dismantled and recycled in Europe |
| | | 11.4: 100 percent of European ports are carbon-neutral and provide electricity at berths. |

| | | |
|--|---|---|
| | 12: Support the energy transition through renewable low-impact ocean energy | 2.1: At least 35 percent of the EU energy mix is covered by clean, low-impact, renewable ocean energy (wind, wave, tidal, thermal and salinity gradient energy) |
| | 13: Zero-carbon aquaculture | 13.1: The consumption of low trophic aquaculture (e.g. algae, shellfish, other invertebrates) from European waters, and seas has increased by 70 percent |
| | 14: A thriving blue biotech | 14.1: The EU is the world leader in blue biotech. |
| | | 14.2: The market value of Blue Biotech has reached 200 billion euros |
| | 15: Climate-neutral blue tourism | 15.1: 100 percent of marinas are carbon neutral and provide electricity at berth |
| | | 15.2: 50 percent of tourism resorts and accommodation are converted to low CO2 emission and low CO2 consumption |
| | 16: An integrated and participatory EU system of ocean and water governance | 16.1: A European Ocean and Water Agency is fully established |
| | 17: EU leadership for effective global ocean governance | 17.1: The BBNJ Treaty is enforced [UN] |
| | | 17.2: IUU fishing is eradicated globally [UN] |

| | | |
|--|--|---|
| | | <p>17.3: International ban on all activities causing seabed habitat loss and degradation takes effect [UN]</p> |
| | | <p>17.4: International UN agreement on protection and management of major rivers is concluded and all major rivers of the globe have an internationally supported management plan and national/international commission (EU sponsored set-up and is member of boards of key rivers linked to EU territories, such as Nile, Amazonia, Congo)</p> |
| | | <p>17.5: New international standards for harbours, ports and shipping are enacted [IMO]</p> |
| | | <p>17.6: All EU bilateral trade agreements condition market access to elimination of IUU fishing and fulfilment of international fisheries agreements</p> |
| | | <p>17.7: All maritime surveillance activities of EU agencies and Member States are coordinated and joint surveillance operations in EU and international waters are carried out</p> |

6.1. Example of projects from previously funded calls

This section presents a curated selection of school-led projects funded under previous EU calls, with a particular focus on environmental literacy, water conservation, and citizen science. These projects demonstrate a wide range of approaches spanning from hands-on fieldwork and interdisciplinary learning to digital innovation and inclusive education. Each example illustrates how schools across Europe and neighbouring regions have successfully integrated environmental themes into their curricula, engaged local communities, and fostered long-term stewardship among students.

By showcasing diverse geographical contexts, pedagogical strategies, and scales of implementation, these examples offer practical insights and inspiration for prospective applicants. The outlined activities, outcomes, and curriculum linkages serve as a valuable reference point for designing impactful, replicable, and curriculum-aligned projects that support the EU Mission objectives and promote sustainable development through education.

Example 1

One of our first examples comes from a successfully funded proposal by a school in Morocco. It showcases a strong model of a year-long, freshwater-focused project, implemented on a large scale with a budget of €7,500.

This school-led initiative focuses on raising awareness and developing solutions around two urgent environmental challenges: drought and plastic pollution.

Activities:

- The project begins with classroom-based introductions to these themes, supported by an introductory video.
- Students create educational posters and help identify local sites for excursions.
- During the second and third months, they engage in fieldwork—collecting algae from the coast and plastic waste from nearby beaches.
- They also visit key environmental facilities, including the water and environment laboratory at a local university, a wastewater treatment plant, and a plastic recycling centre.
- In its final phase, the project shifts to innovation and practical application. Students participate in hands-on recycling workshops and work in teams to design and build prototypes of water purification devices using recycled plastics and marine algae.
- These experiences are documented through photos and videos, which students use to create awareness materials highlighting marine pollution and the potential of algae-based solutions. Each step is documented with posters and short explanatory videos detailing the design, materials, and functionality of their creations.

Link to the curriculum:

- **Science:** water conservation, plastic pollution, ecosystem health and environmental biotechnology.
- **Art:** recycling workshops

Example 2

Another example of a well-structured, curriculum-integrated project comes from a school in **Latvia**, which launched a comprehensive, year-long initiative focused on **water quality and sustainability**. With clear planning and community engagement from the outset, the project aimed to promote water literacy and biodiversity awareness.

Activities

- Students will engage in exploratory learning through classroom sessions, field investigations, and outdoor science-based lessons aboard a research vessel.
- They will conduct biodiversity observations and collect water samples along the Vārtāja River and its tributaries using real scientific tools.
- Practical environmental science will be applied using biological indicators to assess water quality.
- Learners will participate in riverbank clean-up efforts and document local pollution sources.
- They will create awareness materials—such as posters, digital campaigns, and a biodiversity-themed public banner—to promote sustainability.
- Cross-border collaboration will allow students to share field data and environmental insights with international peers.
- The project will culminate in creative, interdisciplinary activities during the school’s “different lessons” week, incorporating water-related themes across subjects.

Link to the curriculum:

- **Science:** water quality testing, biodiversity, environmental sampling
- **Geography:** river systems, sustainability
- **ICT and Media:** digital awareness campaigns, content creation
- **Civic Education:** community engagement, environmental responsibility

Example 3:

This example comes from a large-scale, school-led initiative focused on water conservation, literacy, and public engagement. The year-long programme integrates interdisciplinary activities that combine science, art, technology, and community participation. Its core aim is to establish a permanent water-focused exhibition space and to foster environmental awareness among students and the wider public.

Activities:

- Students will create permanent educational exhibits on water conservation, human impact on freshwater ecosystems, and sustainability, incorporating visual displays, touchscreens, flow models, and interactive posters.
- Water quality testing will be conducted in local rivers, lakes, and streams using field kits to measure pH, turbidity, temperature, and pollutants, with findings displayed in real-time through the museum.
- Practical workshops and student-led awareness campaigns will promote water-saving behaviours at school and home, featuring talks by environmental experts and interactive demonstrations.

- Artistic activities will include the creation of visual artworks and digital content (videos, animations) reflecting the importance and beauty of freshwater ecosystems, using recycled materials where possible.
- A digital platform (website and app) will be launched, offering access to water data, educational games, conservation tips, and interactive maps for the wider community.
- Students will design and implement citizen science projects on water pollution, ecosystem health, and conservation, involving residents in data collection and observation.
- A final public exhibition will showcase all project outputs—museum installations, art pieces, scientific data, and research—through tours, presentations, and panel discussions.
- Long-term sustainability efforts will include regular museum updates, ongoing water monitoring, and promotion of project replication in other schools and communities.

Link to the curriculum:

- **Science & Geography:** Water testing, Environmental sampling, Ecosystem observation, Hydrology mapping, Data analysis and visualisation, Coding for environmental monitoring
- **Environmental Studies:** Conservation case studies, Pollution analysis, SDG-focused research, Cultural storytelling on water, Sustainable art creation
- **School Activities & Extracurriculars:** Museum visits, Water-themed workshops, Awareness campaigns, Interdisciplinary projects, Community engagement events

Example 4:

This example outlines a year-long, interdisciplinary programme exploring water, seas, and oceans. The project follows a three-phase structure: learning, creating, and sharing. It combines scientific inquiry, artistic creation, and civic engagement to foster environmental awareness, literacy, and practical stewardship. Activities are designed to be hands-on, inclusive, and embedded within the school's curriculum and community outreach.

Activities:

- Throughout the year, students will engage in interdisciplinary lessons on oceans and freshwater systems, supported by weekly activities such as waste sorting, composting, and plastic collection for recycling with local NGOs.
- From November to February, pupils will explore marine biodiversity and pollution through the lens of a global sailing race, using videos, documentaries, books, and games to study fragile species and ocean ecosystems.
- In February, students will raise salmon fry in classroom aquariums, learning about the species' life cycle and environmental threats in collaboration with a conservation association.

- In March and April, they will visit a fish pass at a local dam and study river ecosystems through multimedia learning.
- In May, field activities at a nearby nature centre will include river observation, fishing, riverbank clean-up, and use of microscopes to analyse micro-particles in water.
- Between March and May, students will co-author a story and design an educational board game, collaborate with an illustrator, and translate their work into multiple languages including German and Braille.
- In June and July, students will present their stories and games to kindergarteners and to visually impaired students, fostering inclusion and shared learning.
- The project will be shared with international partner schools and disseminated to the wider public through exhibitions at science centres, education organisations, and local events.
- A final evaluation activity will invite students to reflect on what they learned and identify how their behaviours have changed, with a focus on reducing plastic use.

Link to the curriculum:

- **Language & Literature:** Reading, Collaborative storytelling, Descriptive writing, Vocabulary building
- **Moral and Civic Education (EMC):** Environmental responsibility, Sustainable development, Ecological citizenship
- **Art:** Visual arts, Performing arts, Music integration, Environmental storytelling
- **Media and Environmental Literacy:** Documentary viewing, Animated film discussions, Inclusive content creation, Multilingual media production

Example 5:

This example features an inclusive, school-led project aimed at strengthening environmental literacy and conservation skills among students, with a particular focus on supporting Special Educational Needs (SEN) learners. Through structured training, real-world field experiences, inclusive teaching resources, and community outreach, the project fosters hands-on engagement with local river ecosystems.

Activities:

- Formation of support groups and completion of a 20-hour environmental education course on river ecosystems and conservation, followed by collaborative river monitoring sessions
- Field visits to diverse conservation areas for river ecosystem mapping, observation, and hands-on conservation activities guided by experts
- Development and classroom testing of inclusive teaching materials, including sensory-based outdoor lesson plans, interactive posters, and an e-book for SEN students

- Student-led awareness campaigns using educational materials to engage community members through workshops, presentations, and interactive activities

Link to curriculum

- **Science:** River ecosystems, Environmental education, Conservation techniques, Ecosystem monitoring
- **Geography:** Field visits to river locations, Ecosystem mapping, Study of local conservation areas
- **Art:** Creation of interactive posters and visual materials
- **Literature & Media:** E-book development, Sensory-based educational content
- **Civic Education:** Community awareness campaigns, Environmental stewardship, Public engagement activities

Example 6:

Another example of a well-structured, curriculum-integrated project comes from a school in Poland. The project 'A drop without plastic - together for the future' will study the river ecosystems of the main rivers flowing through the city of Wrocław and will monitor water consumption in students' households.

Activities:

- River water quality and biodiversity analysis through field studies.
- Educational tours to water-related facilities: Odra Centre, Hydropolis, and the Na Grobli Water Treatment Facility.
- Household water consumption monitoring.
- A "Drink tap water" public awareness campaign.
- Water-themed knowledge and artistic competitions.
- A final project conference.

Link to curriculum:

- **Science (Chemistry, Biology):** River water quality analysis, biodiversity studies.
- **Geography:** River systems, water resources, and environmental impact.
- **Computer Science:** Data analysis, presentation of findings.
- **Extracurricular (Tutor-led, Community Service):** "Drink tap water" campaign, project conference, Earth Day activities.

Example 7:

Another example of a well-structured, curriculum-integrated project comes from a school that proposed to strengthen students' awareness of the ecological and cultural values belonging to freshwater and saltwater bodies that affect them closely by instructing them in the application of standardised citizen science protocols proper for

their long-term enhancement and conservation. Using gamification tools, students will be stimulated in activities that will keep them engaged throughout the project.

Activities:

- **Quiz & Playground:** Gamified quizzes to test and reinforce knowledge on biodiversity, ecosystems, and citizen science, coupled with documentary screenings.
- **Clean-up and Macro Monitoring:** Practical Lake clean-ups combined with macro biodiversity monitoring and water quality testing using citizen science tools like FreshWater Watch and iNaturalist.
- **Clean-up and Micro Monitoring:** Estuary clean-ups paired with laboratory analysis of micro biodiversity and microplastics in water and sand samples.
- **European Blue School:** Concurrent subproject with the Nautical Institute focusing on marine pollution and achieving the "European Blue School" certification.

Link to the Curriculum:

- **Science (Environmental Science, Biology, Chemistry, Physics):** Water cycles, biodiversity, chemical/physical water parameters, and pollution impact.
- **Social Studies (Civics):** Citizen science applications, environmental responsibility, and community impact.
- **Extracurricular (OutBe Day Activities, European Blue School Project):** Practical field studies, collaborative projects with external institutions, and citizen science applications.

Example 8:

To underscore the interconnectedness of European water resources, a Dutch Technasium school proposes a Rhine River water quality study, blending hands-on scientific investigation with an exploration of European collaboration.

Activities:

- **In-School Project:** Project-based learning on microplastics, water purification, and pollution using GLOBE protocols and lab equipment, including local freshwater sampling.
- **Institutional Visits:** Day trips to Rijkswaterstaat and RIVM to understand Dutch water governance and quality management.
- **Water Purification Site Visits:** Learning about water purification technologies.
- **Rhine River Expedition:** A European trip following the Rhine from Switzerland to the Netherlands, collecting and analysing water samples and measuring river physical characteristics.
- **Result Dissemination:** Creating scientific posters, uploading results to GLOBE, presenting at science fairs, and submitting to the ProBleu consortium.

Link to the curriculum:

- **IT Curriculum:** Project-based learning focused on scientific research and technological applications.
- **GLOBE Program:** Utilizing established scientific protocols for environmental monitoring.
- **Science (Environmental Science, Chemistry, Physics):** Analysing water quality, understanding pollution impacts, and applying scientific methodologies.
- **Social Studies (Civics, European Studies):** Exploring European cooperation and water governance.
- **Extracurricular (Field Trips, Science Fairs, International Collaboration):** Enhancing practical skills, fostering scientific communication, and promoting global awareness.

Example 9:

The GAS Project, implemented by the 2nd Primary School of Lamia, aims to raise students' environmental awareness and cultivate their understanding of the impact of human activity on ocean health and biodiversity, utilising citizen science and promoting sustainable behaviours.

Activities:

- **Project Setup:** Team formation, activity planning, role assignments, and stakeholder engagement (Municipality, Parents' Association, Regional Directorate).
- **Educational Events:** "Blue Info Days" featuring documentaries and activities on marine ecosystem issues.
- **Outdoor Activities:** Beach cleanups with waste categorisation using the Marine Debris Tracker App, and water/sand sampling with microplastic analysis and species recording using iNaturalist.
- **Environmental Education Trip:** Visit to Syros Environmental Education Center for training on Poseidonia meadow preservation.
- **eTwinning Collaboration:** Joint project with a Spanish school for data comparison and marine life education.
- **Project Showcase:** School festival presenting project activities to the community.
- **Media Production:** Documentary film, expert podcasts, and a dedicated school newspaper issue.
- **Educational Resource Creation:** Handbook with lesson plans for replicating outdoor activities.
- **Dissemination:** Sharing project findings and resources with schools and the public.

Link to the Curriculum:

- **Skills Workshops:** Integrating project activities into the “Preservation of the Environment” thematic module (ecology, climate change).
- **Educational Trips:** Utilising project activities as content for school-organised environmental excursions.
- **Science (Biology, Environmental Science):** Marine biodiversity studies, pollution impacts.
- **Technology (App Use):** Utilising apps like Marine Debris Tracker and iNaturalist.
- **Civic Education:** Promoting community engagement and environmental responsibility.

Example 10:

This is another successful school example that aims to empower urban students as marine conservation ambassadors through the CJD_BLUE project, bridging scientific knowledge with practical action and creative expression.

Activities:

- **Preparation & Planning:** Establishing partnerships and developing pre-cleaning awareness campaigns.
- **Beach Cleaning:** Organized beach cleanup tailored to different age groups, with CIIMAR-led preparatory sessions.
- **Scientific-Artistic Development:** Collaborative creation of marine-themed artworks, focusing on specific ecosystem aspects for each educational cycle.
- **Exhibition & Installation:** Public exhibition of artworks in metro stations, with QR codes for further engagement.
- **Ongoing:** Detailed documentation for Blue School certification.

Link to the curriculum:

- **Mathematics:** Data analysis of cleanup results.
- **Environmental Studies/Nature Sciences:** Exploration of marine ecosystems and water quality.
- **Biology, Geography, Physics, Chemistry:** Advanced study of ecosystems, coastal dynamics, and material degradation.
- **Visual Arts:** Artistic representation of marine themes.
- **Extracurricular:** The project integrates curriculum learning through hands-on activities and creative expression, fostering environmental awareness and community engagement beyond regular classroom instruction.

6.2. Subject-wise project ideas

These project ideas are categorised based on subjects, allowing you to choose the topic that interests you the most. You can use these ideas as inspiration to create or modify projects. These

ideas are designed to fit most curriculums in general, so feel free to tailor them to your specific needs.

Music

Exploring the sounds of water (target 1.1)

Students will explore the concept of water literacy through music composition and performance. By immersing themselves in the sounds of water, students will develop a deeper appreciation for this vital resource while honing their musical skills.

For primary schools

Activities

- Sound exploration: Students will listen to various recordings of water sounds (rain, rivers, ocean waves, etc.) and identify different musical elements such as pitch, rhythm, and dynamics.
- Instrument exploration: Students will experiment with different instruments to recreate water sounds. This could include using percussion instruments, recorders, or even homemade instruments like water xylophones.
- Composition: Students will work collaboratively to compose a short musical piece inspired by the sounds of water. Teachers can guide the composition process by introducing basic music notation concepts and encouraging creativity.
- Music notation: Students will learn about basic music notation, including rhythm, pitch, and dynamics. They will create a score of their composition, which can be a collaborative effort or individual work.
- Performance: Students will rehearse and perform their composition for the school community, showcasing their musical talents and understanding of water.

Links to the music curriculum

- Listening
- Composing
- Performing
- Understanding music notation

Cross-curricular links

- Science: Water cycle, properties of water, water conservation
- Language: Descriptive language, storytelling
- Art: Visual representation of water, sound art

For secondary schools

Activities

- **Water research:** Students will conduct research on water-related topics such as water pollution, or water scarcity.

- **Sound recording:** Students will record their own water sounds using recording equipment. This could involve field trips to local rivers, lakes, or coastlines.
- **Composition:** Students will compose original musical pieces inspired by their research and sound recordings. This could involve experimenting with different musical styles and incorporating electronic music elements.
- **Music technology:** Students will use music technology software to create and manipulate their compositions, exploring digital audio workstations and music notation software.
- **Performance:** Students will prepare and perform their compositions for the school community, incorporating visual elements or multimedia presentations to enhance the performance.

Links to the music curriculum

- Composition
- Performance
- Music technology
- Aural skills

Cross-curricular links

- **Science:** Water cycle, water pollution, environmental science
- **Geography:** Water resources, hydrological cycle
- **Language:** Research, presentation skills
- **Art:** Multimedia composition, visual arts

Underwater noise pollution (target 10.1)

To develop students' understanding of underwater noise pollution while fostering creativity and musical expression.

For primary schools

Activities

- **Introduction to Underwater Noise:** Discuss the concept of sound and how it travels through different mediums, focusing on water. Explore the importance of a quiet underwater environment for marine life. Listen to recordings of underwater soundscapes (whales, dolphins, fish, etc.) and discuss the atmosphere they create.
- **Composition and Performance:** Students create rhythmic patterns and melodies inspired by water-related sounds (rain, waves, bubbles, etc.). Introduce percussion instruments to represent water droplets, bubbles, and underwater creatures. Encourage the use of vocal sounds to mimic marine life or underwater ambiance. Compose short pieces focusing on peaceful and harmonious sounds, avoiding loud or harsh noises. Perform compositions to their classmates, explaining the inspiration behind their music.
- **Creative Expression:** Create visual representations of their compositions (drawings, paintings, or collages). Write short stories or poems about the underwater world, linking them to their music.

Links to the music curriculum

- Composition
- Performance
- Listening
- Creativity

Cross-curricular links

- **Science:** Understanding sound, habitats, and ecosystems.
- **Art and Design:** Visual representation of musical ideas.
- **Literacy:** Writing and storytelling.

For secondary schools

Activities

- **Research and Analysis:** Investigate the impact of human activities on underwater noise pollution (shipping, oil exploration, sonar). Analyse scientific data on noise levels and their effects on marine life. Discuss the concept of acoustic ecology and the importance of sound balance in ecosystems.
- **Composition and Production:** Experiment with different musical styles and genres to represent the underwater world. Compose original pieces that reflect the peaceful underwater environment and contrast it with the disruptive effects of noise pollution. Utilise technology to create soundscapes and electronic music, exploring various sound effects and textures. Collaborate in group compositions, combining individual contributions to create a larger piece.
- **Public Awareness:** Perform compositions at a school assembly or local community event. Create informative displays or presentations about underwater noise pollution. Develop a social media campaign to raise awareness about the issue.

Links to the music curriculum

- Composition
- Performance
- Music technology
- Music theory

Cross-curricular links

- **Science:** Ecology, environmental science, data analysis
- **Geography:** Human impact on the environment
- **Media Studies:** Creating media products for public awareness

Literature

Water and its importance to life (target 1.1)

Students will explore the multifaceted nature of water through creative writing and collaborative projects. This project aims to foster a deep appreciation for water, its importance for life, and the responsibility we must protect it.

For primary schools

Activities

- **Water exploration:** Students will engage in sensory exploration of water through activities such as water play, observing water in different forms (rain, rivers, oceans), and conducting simple experiments.
- **Creative writing:** Based on their experiences, students will write poems, short stories, or diary entries about water. These could explore topics like the water cycle, water creatures, or personal experiences with water.
- **Collaborative storytelling:** Students will work in groups to create stories or poems about water, fostering cooperation and sharing ideas.
- **Water conservation:** Introduce the concept of water conservation through discussions, role-plays, and creative writing prompts. Students could write about water-saving superheroes or create public service announcements.
- **Water art:** Students can express their understanding of water through visual arts, such as painting, drawing, or sculpture. These can be integrated into the final compilation.

Links to the literature curriculum

- Literacy skills
- Creative writing
- Speaking
- Listening

Cross-curricular links

- **Science:** Water cycle, properties of water, living things and their habitat
- **Art and Design:** Creative expression, visual communication

For secondary schools

Activities

- **Water research:** Students will research various water-related topics, such as water scarcity, pollution, or water management. They can use a variety of sources, including books, articles, and online resources.
- **Creative writing:** Based on their research, students will write short stories, poems, or essays exploring themes such as environmental impact, social justice, or personal reflections on water.
- **Genre exploration:** Students can experiment with different literary genres, such as science fiction, dystopian, or historical fiction, to convey their messages about water.
- **Public awareness campaign:** Students can create campaigns to raise awareness about water issues, using a variety of media (e.g., social media, presentations, posters) to engage their peers.
- **Water-related debates:** Students will participate in debates or discussions on water-related topics, developing critical thinking and argumentation skills.

Links to the literature curriculum

- Literary analysis
- Creative writing

- Research
- Argumentation

Cross-curricular links

- **Geography:** Water cycle, water resources, environmental issues
- **Science:** Water chemistry, water pollution, ecosystems
- **Citizenship:** Global issues, environmental responsibility

Narratives of the Sea: Exploring Maritime Themes in Literature (target 17.5)

Students will embark on an imaginative journey exploring the world of water through literature. They will delve into maritime tales, analyse character development, and understand the importance of the oceans. Through creative writing and artistic expression, students will develop a deep appreciation for the marine environment.

For primary schools

Activities

- **Read and discuss:** Explore a variety of maritime literature, such as children's stories, poems, and picture books. Discuss characters, settings, and themes related to water.
- **Vocabulary building:** Introduce nautical terms and expand students' vocabulary related to the sea, ships, and marine life.
- **Creative writing:** Encourage students to write their own poems, stories, or plays based on maritime themes. They can imagine being a sailor, a fish, or a sea creature.
- **Art and craft:** Create visual representations of their literary work through drawing, painting, or collage.
- **Field trip (optional):** Visit a local beach, aquarium, or maritime museum to enhance their understanding of the marine environment.

Links to the literature curriculum

- Reading comprehension
- Writing
- Speaking and listening
- Vocabulary development

Cross-curricular links

- **Science:** Understanding the water cycle, marine life, and environmental issues
- **Art and design:** Visual representation of ideas and emotions

For secondary schools

Activities

- **Literary analysis:** Study a range of maritime texts, including novels, poetry, and drama. Analyse themes, characterisation, and literary devices.
- **Historical context:** Explore the historical and cultural context of maritime literature, examining the impact of exploration, trade, and colonisation on ocean-based societies.

- **Environmental issues:** Investigate contemporary maritime challenges, such as pollution, climate, and overfishing. Analyse how these issues are represented in literature.
- **Creative response:** Write original pieces of creative writing inspired by maritime themes. Students can choose from a variety of genres, including poetry, short stories, or scripts.
- **Research project:** Conduct research on a specific maritime topic, such as piracy, shipwrecks, or oceanography. Present findings in a written or oral format.

Links to the literature curriculum

- Literary analysis
- Creative writing
- Research
- Presentation skills

Cross-curricular links

- **History:** Exploration, trade, and colonisation.
- **Geography:** Oceans, and environmental issues.
- **Science:** Oceanography, marine biology.

Science

Exploring the properties of water (target 1.1)

Students will embark on a scientific exploration of water, investigating its properties, the water cycle, and the importance of water conservation. Through hands-on experiments and creative activities, students will develop a deep understanding of water's role in our lives and environment.

For primary schools

Activities

- **Water cycle experiment:** Observe the water cycle in action by setting up a mini ecosystem in a clear container. Students can add soil, plants, and water, and monitor the evaporation, condensation, and precipitation processes over time.
- **Water filtration challenge:** Construct simple water filters using materials like sand, gravel, and cloth. Test the effectiveness of different filter designs by filtering muddy water and analysing the results.
- **Water conservation campaign:** Create informative posters and short videos about water-saving tips for home and school. Students can conduct water audits in their classrooms and suggest ways to reduce water consumption.
- **Water stories:** Write and illustrate stories or poems about water, exploring themes of its importance, scarcity, and pollution.
- **Field trip (optional):** Visit a local water treatment plant or a natural body of water to learn about water sources and management.

Resources

- Clear containers, soil, plants, water
- Sand, gravel, cloth, muddy water
- Art supplies (poster paper, markers, crayons)
- Digital devices (for video creation)
- Water-related books and resources

Links to the science curriculum

- Properties of matter
- States of matter
- Ecosystems
- Environmental science

Cross-curricular links

- **Language:** Literacy skills (reading, writing, speaking, listening), creative writing
- **Art and design:** Visual communication, creative expression
- **Citizenship:** Environmental responsibility, community engagement

For secondary schools

Activities

- **Water quality analysis:** Collect water samples from different sources (e.g., river, tap, pond) and test for pH, temperature, turbidity, and dissolved oxygen levels. Analyse data to assess water quality and identify potential pollution sources.
- **Hydropower investigation:** Design and build small-scale hydropower models to explore the potential of renewable energy from water. Investigate the environmental impacts and economic feasibility of hydropower.
- **Water scarcity research:** Research water scarcity issues in different regions of the world, analysing causes, consequences, and potential solutions. Develop proposals for sustainable water management strategies.
- **Water-related literature analysis:** Read and analyse literary works that explore themes of water, such as "Water for Elephants" or "The Water-Dwelling Place." Discuss the role of water in the texts and its broader cultural significance.
- **Water conservation campaign:** Develop and implement a water conservation campaign within the school community, using data analysis and persuasive communication to promote water-saving behaviours.

Resources needed

- Water quality testing kits, laboratory equipment (such as www.freshwaterwatch.org)
- Materials for hydropower model construction (cardboard, tape, glue, scissors)
- Access to scientific databases and research materials
- Literary texts
- Digital media for campaign creation

Links to the science curriculum

- Chemistry
- Physics

- Biology
- Environmental science

Cross-curricular links

- **Geography:** Water cycle, water resources, environmental issues
- **Mathematics:** Data analysis, statistics
- **Language:** Literature analysis, persuasive writing
- **Citizenship:** Global awareness, environmental responsibility

Oceanography Quest (target 1.2)

Pupils will become ocean explorers, discovering the wonders of the underwater world through hands-on experiments and creative activities. They will learn about marine life, water cycles, and the importance of protecting our oceans. The project culminates in an ocean-themed event where pupils share their knowledge with the school community.

For primary schools

Activities

- **Ocean experiments:** Conduct simple experiments to explore water properties (e.g., density, buoyancy, surface tension).
- **Marine life exploration:** Learn about different ocean creatures, their habitats, and adaptations.
- **Water cycle model:** Create a visual representation of the water cycle.
- **Ocean-themed art:** Design posters, create models, or write stories about the ocean.
- **Ocean day:** Organise an ocean-themed event with stalls, games, and information sharing.

Resources

- Basic science equipment (e.g., beakers, measuring cylinders).
- Art materials (paint, paper, cardboard).
- Books and resources about the ocean.

Links to the science curriculum

- Water
- Materials
- Living things

Cross-curricular links

- **Art and Design:** Creative expression, communication.
- **Geography:** Maps, location, environment.

For secondary schools

Activities

- **Oceanographic research:** Conduct experiments to investigate topics like salinity, pH, and water density.
- **Marine biology:** Study different marine ecosystems and the challenges they face.
- **Data collection and analysis:** Collect and analyse data related to oceanographic phenomena (e.g., water temperature, wave patterns).
- **Project design and implementation:** Develop and carry out individual or group research projects.
- **Ocean science fair:** Organise a science fair to showcase findings, engage with the public, and promote ocean conservation.

Resources

- Laboratory equipment (e.g., microscopes, pH metres, data loggers).
- Access to scientific databases and resources.
- Presentation materials.

Links to the science curriculum

- Biology
- Chemistry
- Physics

Cross-curricular links

- **Mathematics:** Data analysis, statistics.
- **Design and Technology:** Research, design, evaluation.
- **Citizenship:** Community engagement, problem-solving.

Ocean Forecast Explorers (target 2.3)

Pupils will become ocean forecasters, learning about how scientists predict weather and sea conditions. They will explore the importance of understanding the ocean and how it affects our lives.

For primary schools

Activities

- **Ocean observation:** Observe the sea or a large body of water, noting weather conditions and wave patterns.
- **Weather watchers:** Learn about different types of weather and how they affect the sea.
- **Ocean models:** Create simple models to demonstrate how waves are formed and how wind affects the water.
- **Ocean predictions:** Make predictions about the weather and sea conditions based on observations.
- **Ocean heroes:** Discuss the importance of understanding the ocean for protecting our coasts and marine life.

Resources

- Weather charts and information.

- Materials for building models (e.g., cardboard, plastic containers).
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Weather
- Water
- Forces

Cross-curricular links

- **Geography:** Maps, weather patterns.
- **Art and Design:** Creative expression, communication.

For secondary schools

Activities

- **Ocean data collection:** Research different methods of collecting ocean data (e.g., satellites, buoys, ships).
- **Ocean modelling:** Learn about computer models used to simulate ocean behaviour.
- **Data analysis:** Explore how data is used to create forecasts and predictions.
- **Case studies:** Investigate real-world examples of how ocean forecasting has been used to address challenges.
- **Communication:** Create informative materials (e.g., presentations, infographics) to explain ocean forecasting to a wider audience.

Resources

- Access to oceanographic data and models.
- Computer software for data analysis and visualisation.
- Presentation software.

Links to the science curriculum

- Physics
- Computer science

Cross-curricular links

- **Mathematics:** Data analysis, statistics.
- **Geography:** Coastal geography, climate change.
- **Design and Technology:** Information technology, communication.

Seabed Cartographers (target 2.4)

Pupils will become seabed explorers, discovering the hidden world beneath the waves. They will learn about different tools used to map the seabed, the importance of knowing about the ocean floor, and how to share their findings.

For primary schools

Activities

- **Ocean exploration:** Discuss different types of marine life and their habitats.
- **Seabed mapping:** Create a simple map of the classroom floor to represent a seabed, using different materials to show different features.
- **Treasure hunt:** Play a game where pupils use clues to find hidden objects on a map, simulating a seabed exploration.
- **Ocean protection:** Discuss the importance of knowing about the seabed for protecting marine life and our coasts.
- **Sharing findings:** Create a class display of seabed maps and discoveries.

Resources

- Maps, globes, or pictures of the ocean floor.
- Different materials for creating seabed models (e.g., sand, pebbles, fabric).
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Habitats

Cross-curricular links

- **Geography:** Maps, location, environment.
- **Art and Design:** Creative expression, communication.

For secondary schools

Activities

- **Seabed exploration:** Research different methods of seabed mapping (e.g., sonar, multibeam echo sounders).
- **Data collection and analysis:** Learn about data processing techniques used to create seabed maps.
- **Map interpretation:** Analyse existing seabed maps to identify features and patterns.
- **Model creation:** Create a digital or physical model of a seabed area based on collected data.
- **Communication of findings:** Develop presentations or reports to explain the importance of seabed mapping and share their findings.

Resources

- Access to seabed mapping data and images.
- Geographical Information Systems (GIS) software (optional).
- Mapping and modelling tools.
- Presentation software.

Links to the science curriculum

- Geology
- Physics

Cross-curricular links

- Geography: Geographical information systems, marine geography.
- Mathematics: Data analysis, statistics.
- Design and Technology: Data handling, modelling.

Aquatic Ecosystem Renaissance (target 5.2)

Pupils will become river detectives, exploring how rivers change over time. They will learn about the importance of healthy rivers and how to help protect them.

For primary schools

Activities

- **River exploration:** Visit a local river and observe the plants and animals living there.
- **River changes:** Discuss how rivers can change due to human activities.
- **River restoration:** Learn about ways to help restore a river, such as planting trees or cleaning up litter.
- **Creative expression:** Design posters or stories about river care.

Resources

- Pictures and information about river animals and plants.
- Litter picking equipment.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Habitats
- Water

Cross-curricular links

- **Geography:** Rivers, landscapes.
- **Art and Design:** Creative expression, communication.
- **Citizenship:** Community involvement, environmental awareness.

For secondary schools

Activities

- **River selection:** Choose a restored river for study.
- **Data collection:** Use FreshWater Watch kits and other methods to collect data on water quality, sediment, and aquatic life.
- **Hydro-morphological assessment:** Evaluate changes in river shape, flow, and sediment transport.
- **Biodiversity monitoring:** Assess changes in plant and animal species diversity.
- **Data analysis:** Use statistical software to analyse collected data and identify trends.
- **Communication of findings:** Create presentations or reports to share results and recommendations.

Resources

- FreshWater Watch kits or similar water quality testing equipment.
- Data recording sheets.
- Statistical software (optional).
- Digital cameras for recording river conditions.
- Presentation software.

Links to the science curriculum

- Biology
- Chemistry

Cross-curricular links

- **Mathematics:** Data analysis, statistics.
- **Geography:** Hydrology, environmental management.
- **Computer Science:** Data handling (optional).
- **Citizenship:** Community engagement, environmental awareness.

Ocean Conservation Research (target 6.1)

Students will investigate the impact of destructive fishing practices on seabed habitats, exploring alternative fishing methods and monitoring their effectiveness. They will develop a deeper understanding of marine ecosystems and the importance of sustainable fishing.

For primary schools

Activities

- **Ocean exploration:** Learn about different sea creatures and where they live.
- **Fishing methods:** Discuss different ways to catch fish and how some methods can harm the seabed.
- **Seabed models:** Create models of the seabed with and without damage.
- **Ocean protection:** Explore ways to protect the seabed, such as creating marine protected areas.
- **Sharing knowledge:** Create posters or stories about seabed life and protection.

Resources

- Pictures and information about seabed creatures.
- Materials for building seabed models (e.g., sand, pebbles, plastic animals).
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Habitats
- Ecosystems

Cross-curricular links

- **Geography:** Maps, oceans.
- **Art and Design:** Creative expression, communication.
- **Citizenship:** Environmental awareness, community involvement.

For secondary schools

Activities

- **Seabed research:** Explore different types of seabed habitats and their ecological importance.
- **Fishing methods:** Research various fishing techniques and their impact on the seabed.
- **Data collection:** Gather data on seabed conditions, fish populations, and fishing activities.
- **Experimentation:** Conduct simulations or experiments to test different fishing gear.
- **Monitoring and evaluation:** Develop a monitoring plan to assess the effectiveness of alternative fishing methods.
- **Communication of findings:** Create presentations, reports, or infographics to share findings and recommendations.

Resources

- Scientific papers and reports on seabed habitats and fishing practices.
- Data collection equipment (e.g., underwater cameras, sediment samplers).
- Geographical Information Systems (GIS) software (optional).
- Statistical software (optional).
- Presentation software.

Links to the science curriculum

- Biology
- Ecology

Cross-curricular links

- **Mathematics:** Data analysis, statistics.
- **Geography:** Marine environments, coastal management.
- **Design and Technology:** Data handling, modelling.
- **Citizenship:** Environmental awareness, sustainable development.

Plastic Material Innovation (target 7.1)

Pupils will become plastic detectives, exploring the world of plastics and their impact on our planet. They will learn about different types of plastics, their uses, and how to reduce plastic waste.

For primary schools

Activities

- **Plastic Hunt:** Explore the school environment to find different plastic items.
- **Plastic Sorting:** Sort plastics into different categories (e.g., bottles, bags, food packaging).

- **Plastic Life Cycle:** Discuss where plastics come from and where they go after use.
- **Plastic Alternatives:** Explore reusable alternatives to plastic items (e.g., water bottles, shopping bags).
- **Creative Expression:** Design posters or stories about reducing plastic waste.

Resources

- A variety of plastic items for sorting.
- Information about different types of plastics.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Recycling
- Materials

Cross-curricular links

- **Art and Design:** Creative expression, communication.
- **Citizenship:** Environmental awareness, responsible consumption.

For secondary schools

Activities

- **Plastic analysis:** Research the different types of plastics and their properties.
- **Plastic production:** Explore the process of plastic production and its environmental impact.
- **Plastic recycling:** Investigate the recycling process and its limitations.
- **Experimentation:** Conduct experiments to test the strength, durability, and biodegradability of different plastics.
- **Design challenge:** Design a reusable or recyclable product made from sustainable materials.
- **Communication of findings:** Create presentations, reports, or models to share findings and designs.

Resources

- Samples of different types of plastics.
- Laboratory equipment for testing plastic properties (e.g., tensile strength tester).
- Information on plastic production and recycling processes.
- Presentation software.

Links to the science curriculum

- Chemistry
- Environmental science
- Materials

Cross-curricular links

- **Design and Technology:** Product design, materials technology.
- **Mathematics:** Data analysis, measurement.

- **Citizenship:** Environmental awareness, sustainable development.

Nutrient Cycling Innovations (target 8.1)

Pupils will become soil superheroes, learning about how to keep our soil healthy. They will explore the importance of nutrients for plants and how to recycle them.

For primary schools

Activities

- **Soil exploration:** Investigate different types of soil and what lives in it.
- **Plant growth:** Observe how plants grow and what they need to thrive.
- **Composting fun:** Create a mini-compost bin and observe the process.
- **Nutrient cycle:** Learn about how nutrients move between plants, soil, and water.
- **Sharing knowledge:** Create posters or stories about soil care.

Resources

- Soil samples, compost materials, and plants.
- Magnifying glasses.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Growth
- Materials

Cross-curricular links

- **Geography:** Soils, environment.
- **Art and Design:** Creative expression, communication.

For secondary schools

Activities

- **Nutrient cycle research:** Explore the nitrogen and phosphorus cycles in ecosystems.
- **Experiment design:** Design experiments to measure nutrient levels in soil, water runoff, and plant tissues.
- **Data collection:** Collect data on nutrient concentrations using appropriate methods.
- **Data analysis:** Analyse data to identify trends and patterns.
- **Nutrient management strategies:** Develop strategies to reduce nutrient loss, such as composting, cover crops, or bioretention.
- **Communication of findings:** Create presentations, reports, or models to share results and recommendations.

Resources

- Nutrient testing kits (e.g., for nitrogen, phosphorus).
- Soil and plant samples.

- Laboratory equipment (e.g., pH metres, conductivity metres).
- Data recording sheets.
- Statistical software (optional).

Links to the science curriculum

- Biology
- Chemistry
- Ecology

Cross-curricular links

- **Geography:** Soils, water quality.
- **Mathematics:** Data analysis, statistics.
- **Design and Technology:** Experimentation, data handling.

Advanced Wastewater Treatment Innovations (target 8.3)

Pupils will learn about water cleaners, learning about how to make dirty water clean. They will explore different ways to clean water and understand the importance of clean water for plants and animals.

For primary schools

Activities

- **Water exploration:** Investigate different types of water (e.g., tap water, pond water).
- **Water filtration:** Create simple water filters using materials like sand, gravel, and cloth.
- **Water testing:** Observe the water before and after filtration.
- **Water conservation:** Discuss ways to save water and protect water resources.
- **Creative expression:** Design posters or stories about clean water.

Resources

- Different types of water samples.
- Materials for building water filters (e.g., bottles, sand, gravel, cloth).
- Magnifying glasses.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Water
- Materials

Cross-curricular links

- **Geography:** Water cycle, pollution.
- **Art and Design:** Creative expression, communication.

For secondary schools

Activities

- Visit a wastewater treatment plant.
- **Treatment process design:** Research and select appropriate treatment technologies (e.g., membrane filtration, UV disinfection, advanced oxidation).
- **Treatment system construction:** Build a small-scale wastewater treatment system using available materials or equipment.
- **Water quality monitoring:** Collect and analyse water samples before and after treatment to assess the removal of contaminants.
- **Data analysis:** Use statistical methods to evaluate the effectiveness of the treatment system.
- **Communication of findings:** Create reports, presentations, or models to share results.

Resources

- Wastewater samples.
- Water quality testing kits.
- Materials for building a treatment system (e.g., pumps, filters, UV lamps).
- Laboratory equipment (e.g., pH metres, conductivity metres).
- Data recording sheets.
- Statistical software (optional).

Links to the science curriculum

- Chemistry
- Biology
- Physics

Cross-curricular links

- **Geography:** Water resources, pollution.
- **Mathematics:** Data analysis, statistics.
- **Design and Technology:** Design, engineering, problem-solving.

Marine Water Quality Monitoring (target 8.4)

Students will investigate the impact of ship wastewater on marine environments. They will collect and analyse water samples to assess the effectiveness of the new policy requiring treatment of ship waste on land.

For primary schools

Activities

- **Ocean exploration:** Learn about different sea creatures and their habitats.
- **Boat pollution:** Discuss how boats can pollute the sea with dirty water.
- **Water testing:** Simulate water testing by looking for signs of pollution in water samples.
- **Clean seas:** Understand the importance of clean seas for marine life.
- **Creative expression:** Design posters or stories about protecting the ocean.

Resources

- Pictures and information about marine life.
- Water samples (clean and with added pollutants).
- Magnifying glasses.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Habitats
- Water

Cross-curricular links

- **Geography:** Oceans, pollution.
- **Art and Design:** Creative expression, communication.
- **Citizenship:** Environmental awareness, responsible citizenship.

For secondary schools

Activities

- **Water quality parameters:** Research the types of pollutants found in ship wastewater.
- **Sampling locations:** Identify suitable locations for water sampling (e.g., near ports, shipping lanes).
- **Data collection:** Collect water samples before and after the policy implementation.
- **Water analysis:** Analyse samples for nutrient levels, pollutants, and microbial content.
- **Data analysis:** Compare water quality data before and after the policy change.
- **Communication of findings:** Create reports, presentations, or infographics to share results.

Resources

- Water sampling equipment.
- Water quality testing kits.
- Laboratory equipment for analysis.
- Data recording sheets.
- Statistical software (optional).
- Geographic Information Systems (GIS) software (optional).

Links to the science curriculum

- Biology
- Chemistry

Cross-curricular links

- **Mathematics:** Data analysis, statistics.
- **Geography:** Oceans, pollution, environmental management.
- **Computer Science:** Data handling, analysis (optional).
- **Citizenship:** Environmental awareness, sustainable development.

Eco-Friendly Ship Technologies (target 9.1)

Students will investigate the application of renewable energy technologies to ships. They will design and model different systems, assessing their potential impact on fuel consumption and emissions.

For primary schools

Activities

- **Ship exploration:** Learn about different types of ships and how they move.
- **Green energy:** Discuss the importance of using clean energy to protect the environment.
- **Wind and solar power:** Explore how wind and sun can be used to power ships.
- **Ship design:** Create models of ships with windmills or solar panels.
- **Sharing knowledge:** Design posters or stories about green ships.

Resources

- Pictures and information about ships.
- Materials for building ship models (e.g., cardboard, paper, sticks).
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Energy
- Forces
- Materials

Cross-curricular links

- **Geography:** Transport, environment.
- **Art and Design:** Creative expression, design.

For secondary schools

Activities

- **Ship design and analysis:** Research ship design and energy consumption patterns.
- **Renewable energy technology:** Explore solar and wind power systems for marine applications.
- **System modelling:** Create models or simulations of different energy systems.
- **Environmental impact assessment:** Evaluate the potential environmental impact of the proposed technologies.
- **Economic analysis:** Consider the cost-effectiveness of the proposed systems.
- **Communication of findings:** Create presentations, reports, or models to share results and recommendations.

Resources

- Ship design software (optional).
- Energy modelling software (optional).

- Materials for building ship models (e.g., cardboard, wood).
- Data collection and analysis tools.
- Presentation software.

Links to the science curriculum

- Physics
- Engineering
- Environmental science

Cross-curricular links

- **Mathematics:** Data analysis, modelling.
- **Design and Technology:** Product design, engineering.
- **Geography:** Transport, environment.

Micro-Pollutant Reduction Strategies (target 9.4)

Pupils will become water protectors, learning about tiny pieces of plastic called microfibres and how they can harm our waterways. They will design simple filters to catch these tiny fibres.

For primary schools

Activities

- **Water exploration:** Discuss the importance of clean water for plants and animals.
- **Microfibre mystery:** Learn about tiny pieces of plastic called microfibres.
- **Filter design:** Create simple filters using materials like tights or old clothes.
- **Water testing:** Test the filters to see how well they catch tiny particles.
- **Sharing knowledge:** Create posters or stories about protecting our water from microfibres.

Resources

- Different types of fabric (e.g., cotton, polyester).
- Water and containers.
- Magnifying glasses.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Water
- Materials

Cross-curricular links

- **Geography:** Water cycle, pollution.
- **Art and Design:** Design, creativity.
- **Citizenship:** Environmental awareness, responsible consumption.

For secondary schools

Activities

- **Microfibre research:** Research the sources and impacts of microfiber pollution.
- **Filter design:** Design and construct filters using different materials (e.g., mesh, activated carbon).
- **Experimentation:** Test filter efficiency under different washing conditions.
- **Data collection:** Collect and analyse data on microfibre capture rates.
- **Evaluation:** Assess the effectiveness of different filter designs.
- **Communication of findings:** Create presentations or reports to share results and recommendations.

Resources

- Different types of fabric (e.g., cotton, polyester, fleece).
- Washing machines or washing machine simulators.
- Water quality testing equipment (e.g., microscopes).
- Data recording sheets.
- Presentation software.

Links to the science curriculum

- Chemistry
- Biology
- Materials science

Cross-curricular links

- **Geography:** Water pollution, environmental management.
- **Mathematics:** Data analysis, statistics.
- **Design and Technology:** Product design, testing.
- **Citizenship:** Environmental awareness, problem-solving.

Innovations in Underwater Acoustic Emission Reduction (target 10.1)

Students will investigate the impact of underwater noise pollution and explore potential solutions. They will design and test materials and structures to reduce acoustic emissions.

For primary schools

Activities

- **Ocean sounds:** Listen to different ocean sounds and identify the creatures that make them.
- **Noise pollution:** Discuss how human-made noise can harm marine animals.
- **Quiet creations:** Design and build models of objects that make less noise underwater.
- **Ocean protection:** Understand the importance of quiet oceans for marine life.
- **Sharing knowledge:** Create posters or stories about ocean noise and protection.

Resources

- Recordings of ocean sounds.
- Materials for building underwater models (e.g., cardboard, plastic containers).

- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Sound
- Habitats

Cross-curricular links

- **Geography:** Oceans, environment.
- **Art and Design:** Creative expression, design.
- **Citizenship:** Environmental awareness, responsible citizenship.

For secondary schools

Activities

- **Underwater noise research:** Research the sources and impacts of underwater noise.
- **Material testing:** Experiment with different materials (e.g., rubber, foam) to absorb sound.
- **Design and prototyping:** Design and build models of noise-reducing structures (e.g., sound barriers, coatings).
- **Acoustic measurements:** Use sound level metres to measure the effectiveness of different designs.
- **Data analysis:** Analyse data to identify the best performing designs.
- **Communication of findings:** Create presentations or reports to share results and recommendations.

Resources

- Hydrophones or underwater microphones.
- Sound level metres.
- Materials for building models (e.g., wood, metal, rubber).
- Data recording equipment.
- Computer software for data analysis (optional).

Links to the science curriculum

- Physics
- Acoustics
- Environmental science

Cross-curricular links

- **Design and Technology:** Product design, materials technology.
- **Mathematics:** Data analysis, measurement.
- **Geography:** Oceans, environmental management.

Harnessing Ocean Energy for a Sustainable Future (target 12.1)

Pupils will become ocean energy experts, discovering how to harness the power of the sea. They will learn about different types of ocean energy and create models of energy-generating devices.

For primary schools

Activities

- **Ocean exploration:** Discuss the power of the ocean and how it can be used.
- **Energy sources:** Learn about different types of ocean energy (e.g., waves, tides, wind).
- **Model making:** Create simple models of energy-generating devices (e.g., windmills, water wheels).
- **Energy and environment:** Understand how using ocean energy can help protect the planet.
- **Sharing knowledge:** Design posters or stories about ocean energy.

Resources

- Pictures and information about the ocean and energy.
- Materials for building models (e.g., cardboard, paper, sticks).
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Energy
- Forces
- Materials

Cross-curricular links

- **Geography:** Oceans, environment.
- **Art and Design:** Creative expression, design.
- **Citizenship:** Environmental awareness, responsible citizenship.

For secondary schools

Activities

- **Ocean energy research:** Research different forms of ocean energy (wave, tidal, current, thermal, salinity gradient).
- **Energy conversion:** Explore the scientific principles behind energy conversion technologies.
- **Model building:** Create models or simulations of energy conversion devices.
- **Data collection and analysis:** Collect data on energy output, efficiency, and environmental impact.
- **Cost-benefit analysis:** Evaluate the economic feasibility of different ocean energy technologies.
- **Communication of findings:** Create presentations, reports, or models to share results and recommendations.

Resources

- Oceanographic data (e.g., wave height, tidal currents).
- Energy modelling software (optional).
- Materials for building models (e.g., wood, plastic).
- Data recording equipment.
- Presentation software.

Links to the science curriculum

- Physics
- Engineering
- Environmental science

Cross-curricular links

- **Mathematics:** Data analysis, modelling.
- **Design and Technology:** Product design, engineering.
- **Geography:** Oceans, environmental management.
- **Business Studies:** Economics, sustainability.

Measuring Carbon Footprint in Tourism Resorts (target 15.2)

Students will investigate the carbon footprint of tourism resorts and develop strategies to reduce emissions. They will explore renewable energy options, waste management practices, and transportation alternatives.

For primary schools

Activities

- **Holiday exploration:** Discuss different types of holidays and the places people visit.
- **Holiday footprint:** Learn about how holidays can impact the environment.
- **Green holiday ideas:** Explore ways to reduce waste and save energy on holiday.
- **Creative expression:** Design posters or stories about eco-friendly holidays.

Resources

- Pictures and information about different holiday destinations.
- Recycled materials for creating models (e.g., cardboard, paper).
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Energy
- Waste
- Environment

Cross-curricular links

- **Geography:** Tourism, environment.
- **Art and Design:** Creative expression, design.

- **Citizenship:** Environmental awareness, responsible consumption.

For secondary schools

Activities

- **Resort carbon footprint:** Research the carbon footprint of different types of resorts.
- **Energy audit:** Conduct an energy audit of a local resort or hotel.
- **Renewable energy assessment:** Evaluate the potential for solar, wind, or other renewable energy sources.
- **Waste management strategies:** Develop a waste management plan for a resort, including recycling and composting.
- **Transportation analysis:** Explore options for reducing transportation emissions (e.g., electric vehicles, public transport).
- **Cost-benefit analysis:** Assess the economic viability of different sustainability measures.
- **Communication of findings:** Create presentations, reports, or models to share results and recommendations.

Resources

- Data on energy consumption and waste generation in the tourism industry.
- Renewable energy simulation software (optional).
- Waste management data.
- Presentation software.

Links to the science curriculum

- Energy
- Environment
- Climate change

Cross-curricular links

- **Mathematics:** Data analysis, cost-benefit analysis.
- **Geography:** Tourism, environmental management.
- **Business Studies:** Economics, sustainability.
- **Design and Technology:** Systems design, engineering.

Ecological Impact Assessment of the European Ocean and Water Agency (target 16.1)

For primary schools

Pupils will become ocean and river protectors, learning about the importance of caring for our water bodies. They will explore how a special group of people can help keep our waters clean and healthy.

Activities

- **Water world:** Discuss different types of water bodies (rivers, lakes, oceans).
- **Water problems:** Learn about problems facing our waters (pollution, litter).

- **Water heroes:** Introduce the idea of a special group of people who help protect water.
- **Creative expression:** Design posters or stories about water heroes.

Resources

- Pictures of water bodies and marine life.
- Information about water pollution.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Habitats
- Water

Cross-curricular links

- **Geography:** Water bodies, environment.
- **Art and Design:** Creative expression, communication.
- **Citizenship:** Environmental awareness, community involvement.

For secondary schools

Activities

- **Agency research:** Investigate the establishment and mandate of the European Ocean and Water Agency.
- **Policy analysis:** Analyse key policies and initiatives of the agency.
- **Environmental impact assessment:** Assess the potential ecological impacts of the agency's work, including positive and negative effects.
- **Case studies:** Examine specific case studies of the agency's involvement in marine and freshwater projects.
- **Public awareness:** Develop strategies to communicate the agency's work to the public.
- **Communication of findings:** Create presentations, reports, or multimedia products to share results.

Resources

- Reports and publications from the European Ocean and Water Agency.
- Scientific articles and research papers on marine and freshwater ecosystems.
- Data on water quality and biodiversity.
- Presentation software.

Links to the science curriculum

- Biology
- Ecology
- Environmental science

Cross-curricular links

- **Geography:** Oceans, rivers, environmental management.
- **Politics:** Governance, policy analysis.

- **Citizenship:** Global citizenship, environmental awareness.

Evaluating the Ecological Impact of IUU Fishing Eradication (target 17.2)

Pupils will become ocean heroes, learning about the importance of protecting marine life. They will explore the problem of overfishing and how stopping illegal fishing can help our oceans.

For primary schools

Activities

- **Ocean exploration:** Learn about different sea creatures and their habitats.
- **Overfishing:** Discuss how catching too many fish can harm the ocean.
- **Illegal fishing:** Understand what illegal fishing is and why it's bad.
- **Protecting our oceans:** Explore ways to help stop illegal fishing and protect marine life.
- **Creative expression:** Design posters or stories about ocean conservation.

Resources

- Pictures and information about marine life.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Habitats
- Change

Cross-curricular links

- **Geography:** Oceans, environment.
- **Art and Design:** Creative expression, communication.
- **Citizenship:** Global citizenship, environmental awareness.

For secondary schools

Activities

- **IUU fishing research:** Explore the scale and impacts of IUU fishing globally.
- **Data collection:** Gather data on fish populations, marine ecosystems, and fishing activities.
- **Data analysis:** Use statistical methods to analyse changes in fish populations and biodiversity.
- **Impact assessment:** Evaluate the potential ecological benefits of eradicating IUU fishing.
- **Policy analysis:** Research international efforts to combat IUU fishing.
- **Communication of findings:** Create presentations, reports, or infographics to share results and recommendations.

Resources

- Marine biodiversity databases and datasets.

- Fisheries data.
- Statistical software.
- Geographic Information Systems (GIS) software (optional).
- Presentation software.

Links to the science curriculum

- Biology
- Ecology
- Environmental science

Cross-curricular links

- **Geography:** Oceans, marine ecosystems.
- **Mathematics:** Data analysis, statistics.
- **Citizenship:** Global citizenship, environmental awareness.

Monitoring Sustainable Fisheries Compliance (target 17.6)

Students will investigate the compliance of fisheries with EU bilateral trade agreements. They will collect and analyse data on fishing practices and their impact on marine ecosystems.

For primary schools

Activities

- **Ocean Exploration:** Learn about different sea creatures and their homes.
- **Fishing and the Sea:** Discuss how fishing can affect ocean life.
- **Fair Fishing:** Understand the idea of fishing in a way that protects the ocean.
- **Sharing Knowledge:** Create posters or stories about fair fishing.

Resources:

- Pictures and information about marine life.
- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Habitats

Cross-curricular links

- **Geography:** Oceans, environment.
- **Art and Design:** Creative expression, communication.
- **Citizenship:** Global citizenship, environmental awareness.

For secondary school

Activities

- **Trade agreement analysis:** Study relevant EU bilateral trade agreements and their fisheries provisions.
- **Data collection:** Gather data on fish populations, fishing methods, and environmental indicators.
- **Data analysis:** Use statistical methods to assess compliance with trade agreement conditions.
- **Case studies:** Examine specific fisheries and their adherence to sustainable practices.
- **Policy recommendations:** Develop recommendations for improving fisheries management and compliance.
- **Communication of findings:** Create reports, presentations, or infographics to share results and recommendations.

Resources

- Access to EU bilateral trade agreements.
- Fisheries data and statistics.
- Geographic Information Systems (GIS) software (optional).
- Statistical software.
- Presentation software.

Links to the science curriculum

- Biology
- Ecology
- Environmental science

Cross-curricular links

- **Geography:** Oceans, fisheries, globalisation.
- **Mathematics:** Data analysis, statistics.
- **Economics:** Trade, international relations.
- **Citizenship:** Global citizenship, sustainable development.

Enhancing maritime surveillance technologies (target 17.7)

Students will investigate the potential of advanced technologies for maritime surveillance. They will explore the use of artificial intelligence, satellite imagery, and underwater sensors to enhance monitoring and protection of marine environments.

For primary schools

Activities

- **Ocean exploration:** Learn about different sea creatures and their habitats.
- **Ocean problems:** Discuss threats to the ocean, such as pollution and overfishing.
- **Technology helpers:** Explore how technology can help us monitor the ocean.
- **Creative expression:** Design inventions to help protect the ocean.
- **Sharing knowledge:** Create posters or stories about ocean technology.

Resources

- Pictures and information about marine life and ocean technology.

- Art materials (paper, crayons, markers).

Links to the science curriculum

- Living things
- Technology
- Change

Cross-curricular links

- **Geography:** Oceans, environment.
- **Art and Design:** Creative expression, design.
- **Citizenship:** Global citizenship, environmental awareness.

For secondary schools

Activities

- **Maritime surveillance challenges:** Research the challenges faced in monitoring marine activities.
- **Technology exploration:** Investigate existing and emerging technologies for maritime surveillance.
- **System design:** Design a surveillance system incorporating AI, satellite imagery, and underwater sensors.
- **Data analysis:** Explore methods for collecting, processing, and analysing data from surveillance systems.
- **Environmental impact assessment:** Consider the environmental impact of the surveillance system.
- **Communication of findings:** Create presentations, reports, or models to share results and recommendations.

Resources

- Satellite imagery data (if available).
- Oceanographic data (if available).
- Artificial intelligence software (if available).
- Data analysis software.
- Presentation software.

Links to the science curriculum

- Physics
- Environmental science
- Computer science

Cross-curricular links

- **Geography:** Oceans, remote sensing.
- **Mathematics:** Data analysis, modelling.
- **Design and Technology:** Systems design, engineering.
- **Citizenship:** Global citizenship, environmental awareness.

History

Ocean Time Travellers (target 1.2)

Students will embark on a journey through time to discover how societies have interacted with the ocean. By creating a visually engaging timeline, they will explore key historical events, from early exploration to modern-day environmental challenges. The project culminates in a school event combining storytelling, art, and drama to share their findings and inspire ocean conservation.

For primary schools

Activities

- **Historical exploration:** Research and identify key historical figures and events related to the ocean, such as explorers, pirates, fishing communities, and marine discoveries.
- **Timeline creation:** Design and create a visually appealing timeline showcasing the chosen historical events. Students can use various art materials and digital tools.
- **Ocean literacy:** Learn about marine ecosystems, biodiversity, and the importance of ocean conservation.
- **Storytelling and performance:** Develop short stories or plays based on historical research. Students can incorporate drama, puppetry, or costumes to bring their stories to life.
- **Community engagement:** Plan and organise a school event to share their findings with the wider school community. This might include displays, performances, and interactive activities.

Links to the history curriculum

- Timelines
- Historical figures
- Research and presentation skills

Cross-curricular links

- **Art and Design:** Visual communication, creativity, and collaboration.
- **Language:** Storytelling, scriptwriting, and performance.
- **Science:** Basic oceanography, ecosystems, and environmental awareness.

For secondary schools

Activities

- **Historical research:** Conduct in-depth research on specific historical periods, focusing on themes such as exploration, trade, colonisation, and industrialisation. Analyse primary and secondary sources.

- **Timeline development:** Create a detailed timeline incorporating key events, people, and turning points in European ocean history. Consider using digital tools for interactive elements.
- **Ocean literacy:** Explore contemporary ocean challenges, such as overfishing, pollution, and marine protected areas. Develop a strong understanding of ocean ecosystems and their importance.
- **Event planning and execution:** Organise a public event showcasing historical findings and raising awareness about ocean issues. Consider inviting external experts, such as marine biologists or historians, to participate.
- **Public engagement:** Develop engaging presentations, displays, or interactive exhibits to communicate research findings to a diverse audience. Explore digital media options for broader reach.

Links to the history curriculum

- Historical enquiry
- Research, analysis and presentation skills

Cross-curricular links

- **Geography:** Global patterns, environmental issues, and human-environment interaction.
- **Science:** Marine biology, ecology, and environmental science.
- **Language:** Communication, research, and public speaking.
- **Citizenship:** Community engagement, problem-solving, and critical thinking.

Flow of Progress: Water Conservation Through Time (target 3.2)

Students will investigate the historical evolution of water management, analysing the social, economic, and environmental factors that shaped these practices. By constructing a detailed timeline and conducting in-depth research, they will contextualise contemporary water challenges within a broader historical perspective.

For primary schools

Activities

- **Historical research:** Learn about how people obtained water in the past, such as from rivers, wells, and rainwater collection.
- **Timeline creation:** Develop a timeline showcasing key moments in water history, including inventions like the wheel, the Roman aqueducts, and modern plumbing.
- **Water conservation:** Understand the challenges of water scarcity and the importance of conserving water.
- **Creative expression:** Create artwork, stories, or poems that reflect the historical and contemporary significance of water.
- **Community engagement:** Share their findings with the school community through presentations, displays, or water-saving initiatives.

Links to the history curriculum

- Timelines
- Historical figures

- Research skills

Cross-curricular links

- **Art and Design:** Visual communication and creativity.
- **Language:** Storytelling, writing, and presentation.
- **Science:** Water cycle, water properties, and conservation.

For secondary schools

Activities

- **Historical research:** Explore different periods in history, focusing on water management practices, technologies, and policies. Analyse primary and secondary sources.
- **Timeline development:** Create a comprehensive timeline highlighting key milestones in water management, from ancient civilizations to the present day.
- **Case studies:** Examine specific case studies of water management challenges and successes, both historical and contemporary.
- **Data analysis:** Analyse water consumption data and identify trends over time. Consider using statistical analysis and data visualisation tools.
- **Policy evaluation:** Evaluate current water management policies and propose potential solutions based on historical insights.

Links to the history curriculum

- Historical interpretation
- Research and analysis skills

Cross-curricular links

- **Geography:** Water resources, human-environment interaction, and global issues.
- **Science:** Hydrology, water quality, and environmental science.
- **Mathematics:** Data analysis, statistics, and graphing.
- **Citizenship:** Critical thinking, problem-solving, and civic engagement.

Evolution of Fishing Practices (target 6.1)

Students will delve into the history of fishing practices, examining the social, economic, and environmental impacts of different methods. Through research and interviews, they will explore the evolution of fishing regulations and the role of societal attitudes in shaping sustainable fishing practices.

For primary schools

Activities

- **Historical exploration:** Discover different fishing methods used in the past, such as traditional hand lines and nets.
- **Timeline creation:** Create a visual timeline showing how fishing has changed over time, including the introduction of modern technology and the rise of overfishing.

- **Ocean life:** Learn about different types of fish and marine creatures and understand the importance of healthy ocean ecosystems.
- **Sustainable fishing:** Explore the concept of sustainable fishing and how it helps protect our oceans.
- **Creative expression:** Write stories, poems, or create artwork about fish, fishing, and ocean conservation.

Links to the history curriculum

- Timelines
- Historical change
- Research skills

Cross-curricular links

- **Science:** Marine life, ecosystems, and environmental awareness.
- **Art and Design:** Creativity and communication.
- **Language:** Storytelling, writing, and presentation.

For secondary schools

Activities

- **Research:** Investigate the history of fishing, including overfishing, bycatch, and habitat destruction. Analyse primary and secondary sources.
- **Timeline development:** Create a detailed timeline outlining key events in the history of fishing regulations and conservation efforts.
- **Interviews:** Conduct interviews with local fishermen, fishery managers, or marine biologists to gather firsthand accounts of changes in the fishing industry.
- **Data analysis:** Analyse fishing data, such as catch statistics and population trends, to understand the impact of different fishing practices.
- **Policy evaluation:** Evaluate the effectiveness of current fishing regulations and propose potential improvements.

Links to the history curriculum

- Historical interpretation
- Research and analysis skills

Cross-curricular links

- **Geography:** Oceans, marine ecosystems, and human-environment interaction.
- **Science:** Marine biology, ecology, and environmental science.
- **Citizenship:** Civic engagement, problem-solving, and critical thinking.
- **Language:** Research, interviewing, and writing.

Evolution of Wastewater Treatment Practices (target 9.4)

Students will delve into the complex history of wastewater treatment, examining the challenges posed by emerging pollutants. Through research, they will construct a detailed timeline of key events, technological advancements, and policy changes that shape the development of wastewater treatment.

For primary schools

Activities

- **Historical exploration:** Learn about how people disposed of waste in the past, such as throwing it in rivers or burying it.
- **Timeline creation:** Create a visual timeline showing key events in wastewater treatment, such as the invention of the sewer system and the development of modern treatment plants.
- **Water pollution:** Understand the impact of pollution on water and the importance of clean water for plants, animals, and humans.
- **Creative expression:** Write stories or poems about water pollution and its solutions, or create artwork related to water conservation.
- **Community engagement:** Share their findings with the school community through presentations, displays, or water-saving activities.

Links to the history curriculum

- Timelines
- Historical figures
- Research skills

Cross-curricular links

- **Science:** Water cycle, pollution, and environmental awareness.
- **Art and Design:** Creativity and communication.
- **Language:** Storytelling, writing, and presentation.

For secondary schools

Activities

- **Historical research:** Investigate the evolution of wastewater treatment, from early sewer systems to modern treatment plants.
- **Timeline development:** Create a comprehensive timeline highlighting key milestones in wastewater treatment, including the discovery of microorganisms, the development of disinfection techniques, and the emergence of micropollutants.
- **Case studies:** Analyse specific case studies of water pollution incidents and the resulting policy changes.
- **Investigation:** Explore the chemistry and environmental impact of micropollutants, such as pesticides, pharmaceuticals, and PHASes.
- **Policy analysis:** Evaluate the effectiveness of current wastewater treatment regulations and propose potential improvements.

Links to the history curriculum

- Historical interpretation
- Research and analysis skills

Cross-curricular links

- **Science:** Chemistry, biology, environmental science, and technology.

- **Geography:** Water resources, pollution, and human-environment interaction.
- **Citizenship:** Civic engagement, problem-solving, and critical thinking.

Historical Perspectives on Underwater Acoustic Emissions (target 10.1)

Students will delve into the historical development of underwater noise pollution, examining the technological advancements and human activities that contributed to this growing issue. Through research and analysis, they will explore the ecological consequences and potential solutions.

For primary schools

Activities

- **Ocean sounds:** Listen to recordings of ocean sounds and identify different marine creatures.
- **Human impact:** Explore how human activities, such as boats and ships, create noise pollution in the ocean.
- **Animal impact:** Learn about how noise pollution affects marine animals, such as whales, dolphins, and fish.
- **Creative expression:** Create artwork or stories about ocean sounds and the importance of quiet seas.
- **Community engagement:** Share their findings with the school community through presentations, displays, or noise reduction campaigns.

Links to the history curriculum

- Timelines
- Research skills

Cross-curricular links

- Science: Sound, marine life, and environmental impact.
- Art and Design: Creativity and communication.
- Language: Storytelling, writing, and presentation.

For secondary schools

Activities

- **Historical research:** Investigate the history of underwater sound, from early maritime exploration to modern shipping and offshore industries.
- **Technological analysis:** Explore the development of sonar, seismic surveys, and other technologies that generate underwater noise.
- **Environmental impact:** Study the effects of underwater noise on marine mammals, fish, and other marine organisms.
- **Data analysis:** Analyse data on underwater noise levels and their correlation with marine population declines.
- **Policy evaluation:** Examine existing regulations and policies aimed at reducing underwater noise and propose potential improvements.

Links to the history curriculum

- Historical interpretation
- Research and analysis skills

Cross-curricular links

- **Science:** Acoustics, marine biology, ecology, and environmental science.
- **Geography:** Oceans, marine ecosystems, and human-environment interaction.
- **Technology:** Technological development and its impact on society.
- **Citizenship:** Civic engagement, problem-solving, and critical thinking.

Navigating the Evolution of European Ports (target 11.4)

Pupils will explore how ports have changed over time. They will learn about different types of ships, the goods they carried, and the people who worked in ports. Through creative activities, they will understand the importance of ports and the need to protect our environment.

For primary schools

Activities:

- **Historical exploration:** Learn about early trading posts and the goods they traded.
- **Port life:** Explore the different roles of people who work in ports (e.g., sailors, dockworkers, customs officers).
- **Model making:** Create a model of a historical port using recycled materials.
- **Green ports:** Discuss the importance of clean ports and how to protect the environment.
- **Creative expression:** Design posters or create stories about life in a port.

Links to the history curriculum

- Historical change, people and places
- Research skills

Cross-curricular links

- **Geography:** Maps, trade, location.
- **Art and Design:** Creative expression, design.
- **Language:** Storytelling, writing.

For secondary schools

Activities

- **Historical research:** Explore the evolution of European ports from mediaeval trading centres to modern commercial hubs.
- **Case studies:** Analyse specific examples of successful and unsuccessful port development.
- **Design challenge:** Develop a design proposal for a sustainable port, considering factors such as energy efficiency, waste management, and biodiversity.
- **Presentation:** Create a presentation or report to communicate findings and design concepts to the class.

- **Economic impact:** Investigate the economic importance of ports and their role in global trade.

Links to the history curriculum

- Economic history
- Technological change

Cross-curricular links

- **Geography:** Economic geography, trade, urbanisation.
- **Design and Technology:** Research, design, develop, evaluate.
- **Business Studies:** Economics, business operations.
- **Mathematics:** Data analysis, statistics.

The Road to a Global Ban on Seabed Habitat Destruction (target 17.3)

Pupils will learn about the importance of protecting the ocean floor. They will discover that many amazing creatures live on the seabed and that we need to look after their homes. They will understand that people from all over the world work together to protect our planet.

For primary schools

Activities

- **Ocean exploration:** Learn about different sea creatures that live on the seabed.
- **Seabed protection:** Discuss the importance of protecting the ocean floor and why it is important for marine life.
- **Global cooperation:** Understand that people from different countries work together to protect the environment.
- **Creative expression:** Design posters or create stories about seabed creatures and their homes.
- **Role-play:** Act out different roles (e.g., scientists, politicians) discussing how to protect the seabed.

Links to the history curriculum

- Timelines
- Historical figures
- Research skills

Cross-curricular links

- **Science:** Animals, habitats, ecosystems.
- **Geography:** World map, different countries.
- **Art and Design:** Creative expression, communication.
- **Citizenship:** Global citizenship, cooperation.

For secondary schools

Activities

- **Historical research:** Explore the history of human activities impacting the seabed, from fishing to deep-sea mining.
- **Scientific investigation:** Investigate the ecological importance of seabed habitats and the consequences of their destruction.
- **Global cooperation:** Examine the role of international organisations and states in addressing seabed issues.
- **Legal analysis:** Explore the key provisions of the global ban and the challenges of enforcement.
- **Case studies:** Analyse specific examples of seabed habitat loss and restoration efforts.

Links to the history curriculum

- International relations
- Globalisation

Cross-curricular links

- **Geography:** Global issues, environmental management, marine geography.
- **Science:** Marine biology, ecology, geology.
- **Law:** International law, environmental law.
- **Language:** Research, writing, presentation.

Evolution of Fisheries Conditions in Trade Agreements (target 17.6)

Pupils will learn about fishing and how important it is to protect our oceans. They will discover that different countries have rules about fishing and that these rules have changed over time. Through creative activities, they will understand the importance of fair play and protecting our planet.

For primary schools

Activities

- **Ocean life:** Learn about different fish and the importance of healthy oceans.
- **Fishing and trade:** Explore how fish are caught and sold around the world.
- **Fairness and sharing:** Discuss the importance of sharing resources and being fair to others.
- **Creative expression:** Design posters or create stories about fish, fishing, and fair trade.
- **Role-play:** Act out different roles (e.g., fisherman, market trader, government official) discussing fishing rules.

Links to the history curriculum

- Timelines
- Historical figures
- Research skills

Cross-curricular links

- **Science:** Animals, habitats, food chains.
- **Geography:** Maps, trade, globalisation.
- **Art and Design:** Creative expression, communication.

- **Citizenship:** Fair play, cooperation.

For secondary schools

Activities:

- **Historical research:** Explore the history of European fisheries and the development of EU trade policies.
- **Case studies:** Analyse specific examples of EU trade agreements and their impact on fisheries.
- **Economic analysis:** Examine the economic implications of different fisheries policies, including impacts on coastal communities and consumers.
- **Environmental impact:** Assess the environmental consequences of overfishing and the role of trade agreements in promoting sustainable fishing.
- **Policy analysis:** Evaluate the effectiveness of current EU fisheries policies and propose potential improvements.

Links to the history curriculum

- Economic history
- International relations

Cross-curricular links

- **Geography:** Globalisation, trade, environmental management.
- **Business Studies:** Economics, international trade.
- **Science:** Marine biology, ecology.
- **Language:** Research, writing, presentation.

Art and design

Immersive art installation (target 1.2)

Students will collaborate to create an immersive art installation that visually represents the impact of human activities on aquatic environments. This project aims to foster a deep understanding of water's importance, its challenges, and the potential for positive change. Through artistic expression, students will explore water-related issues, develop critical thinking skills, and inspire action within their communities.

For primary schools

Activities

- **Water exploration:** Students will research local water sources, their importance, and their challenges. They will collect water samples, observe aquatic life, and learn about water cycles.
- **Artistic expression:** Students will use various art materials (e.g., clay, paint, recycled materials) to create individual and group artworks representing different aspects of

water. These might include sculptures of water creatures, paintings of water pollution, or sound installations representing water sounds.

- **Collaboration and installation:** Students will work together to combine their artworks into a cohesive installation, discussing how their pieces connect and contribute to the overall message.
- **Reflection and sharing:** Students will reflect on their learning journey and share their artwork with the school community through presentations, exhibitions, and performances.

Links to the art and design curriculum

- Sculpture
- Painting
- Sound art
- Collaboration

Cross-curricular links

- **Science:** Water cycle, ecosystems, pollution, conservation.
- **Language:** Descriptive writing, storytelling, and presentation skills.
- **Citizenship:** Environmental awareness, community engagement.

For secondary schools

Activities

- **Research:** Students will research specific water-related issues (e.g., water scarcity, pollution) and analyse their impact on local, national, and global communities.
- **Data collection:** Students may gather data on water quality, consumption, or related environmental factors to inform their artistic expressions.
- **Conceptualisation and design:** Students will develop a concept for their artistic contribution, considering the overall message of the installation. They will experiment with various creative techniques and media to create impactful pieces.
- **Collaboration and curation:** Students will collaborate to curate the installation, considering the arrangement, lighting, and overall aesthetic.
- **Public engagement:** Students will develop strategies to engage the community with their artwork, such as guided tours, workshops, or social media campaigns.

Links to the art and design curriculum

- Conceptual art
- Installation art
- Media arts

Cross-curricular links

- **Science:** Ecology, environmental science, data analysis.
- **Geography:** Water resources, environmental management.
- **Language:** Research, writing, public speaking.
- **Mathematics:** Data analysis, statistics.

Mapping the seabed through art (target 2.4)

Students will explore the hidden beauty of the seabed by creating artistic representations inspired by real-world marine maps. Through this project, students will develop a deeper understanding of marine ecosystems, the importance of oceanography, and the power of artistic expression.

For primary schools

Activities

- **Seabed exploration:** Students will learn about different marine environments, such as coral reefs, deep-sea trenches, and kelp forests. They can use books, videos, and online resources to explore these underwater worlds.
- **Map study:** Students will examine simple maps of the seabed, focusing on key features like depth, landforms, and marine life.
- **Artistic interpretation:** Students will create two-dimensional or three-dimensional artworks inspired by their seabed research. They can use a variety of materials like paints, clay, or recycled materials to express their interpretation of the underwater world.
- **Sharing and reflection:** Students will share their artwork with classmates, explaining their inspiration and the marine features they represented.

Links to the art and design curriculum

- Sculpture
- Painting
- Mixed media

Cross-curricular links

- **Science:** Marine habitats, ecosystems, map reading.
- **Geography:** Maps, location, physical geography.

For secondary schools

Activities

- **Research:** Students will explore specific seabed features like hydrothermal vents, ocean trenches, or continental shelves. They can use scientific data and imagery to inform their artistic concepts.
- **Map analysis:** Students will analyse detailed marine maps, focusing on contour lines, bathymetry, and geological features. They can use digital tools to manipulate and visualise map data.
- **Artistic exploration:** Students can choose from a variety of art forms, including painting, sculpture, digital art, or installation art. They will experiment with different techniques and materials to represent the complex underwater world.
- **Collaboration and exhibition:** Students can collaborate on a large-scale art installation that represents a specific marine region. They can also curate an exhibition of their artworks, including informative labels and explanations.
- **Public engagement:** Students can create educational materials or presentations to share their knowledge and artwork with the wider community.

Links to the art and design curriculum

- Conceptual art
- Installation art
- Digital media

Cross-curricular links

- **Science:** Oceanography, marine biology, geology.
- **Geography:** Map analysis, GIS, environmental science.
- **Mathematics:** Data analysis, spatial reasoning.

Resilience through art (target 4.2)

Students will explore the concept of resilience in the face of floods and coastal erosion through artistic expression. By creating visual representations of nature-based solutions, students will develop a deeper understanding of environmental challenges and the importance of human-nature interactions.

For primary schools

Activities

- **Understanding floods and erosion:** Students will learn about the causes and impacts of floods and coastal erosion through stories, pictures, and simple experiments.
- **Nature-based solutions:** Students will be introduced to concepts like wetlands, mangroves, and reforestation as ways to protect against floods and erosion.
- **Art exploration:** Students will use a variety of art materials (e.g., clay, paint, recycled materials) to create artworks representing nature-based solutions. They can create sculptures of animals that live in wetlands, paintings of lush green forests, or models of coastal defences.
- **Community sharing:** Students will share their artworks with the school community, explaining the importance of nature-based solutions.

Links to the art and design curriculum

- Sculpture
- Painting
- Mixed media

Cross-curricular links

- **Science:** Weather, water cycle, ecosystems.
- **Geography:** Physical geography, human-environment interaction.

For secondary schools

Activities

- **Research and analysis:** Students will research specific case studies of floods and coastal erosion, analysing their causes, impacts, and existing solutions.

- **Design thinking:** Students will apply design thinking principles to analyse innovative nature-based solutions to address local challenges.
- **Art and technology:** Students can use a variety of art forms, including digital media, to create visually compelling representations of their proposed solutions. They can develop animations, interactive installations, or virtual reality experiences.
- **Community engagement:** Students will collaborate with local communities to identify their needs and concerns related to floods and coastal erosion. They can present their project findings and design proposals to the community.
- **Evaluation and reflection:** Students will assess the effectiveness of their artistic expressions in raising awareness and inspiring action.

Links to the art and design curriculum

- Digital media
- Installation art
- Design thinking

Cross-curricular links

- **Science:** Environmental science, geography, ecology.
- **Geography:** Coastal processes, hazards, environmental management.
- **Mathematics:** Data analysis, modelling.

Plastic transformation (target 7.1)

Students will explore the issue of plastic pollution through artistic expression, focusing on the transition from traditional to sustainable plastics. By creating artworks that highlight the impact of plastic on the environment and the potential for positive change, students will develop a deeper understanding of sustainability and the circular economy.

For primary schools

Activities

- **Plastic awareness:** Students will learn about different types of plastics, their uses, and the environmental impact of plastic waste. They can collect plastic items for observation and discussion.
- **Recycling exploration:** Students will explore recycling processes and the importance of reducing plastic consumption. They can visit a local recycling facility or invite a guest speaker to explain recycling.
- **Art creation:** Students will create artworks using recycled plastic materials or materials that represent sustainable alternatives. They can create sculptures, paintings, or collages that depict plastic's transformation from harmful to helpful.
- **Sharing and reflection:** Students will share their artwork with classmates, discussing the message they want to convey and the importance of reducing plastic waste.

Links to the art and design curriculum

- Sculpture
- Painting
- Mixed media

Cross-curricular links

- **Science:** Materials, recycling, pollution.
- **Citizenship:** Environmental responsibility, sustainability.

For secondary schools

Activities

- **Research:** Students will research the plastic life cycle, from production to disposal. They will investigate the impact of plastic pollution on marine ecosystems and human health.
- **Design thinking:** Students will study innovative ideas for reducing plastic waste and promoting sustainable alternatives. They can focus on product design, packaging, or waste management solutions.
- **Art and technology:** Students will use a variety of art forms to express their ideas, including sculpture, painting, digital art, or installation art. They can incorporate technology to create interactive or immersive experiences.
- **Community engagement:** Students can collaborate with local businesses or organisations to promote plastic reduction and recycling. They can organise awareness campaigns or create public art installations.
- **Evaluation and reflection:** Students will assess the effectiveness of their artworks in raising awareness and inspiring change.

Links to the art and design curriculum

- Product design
- Digital media
- Installation art

Cross-curricular links

- **Science:** Chemistry, materials science, environmental science.
- **Geography:** Environmental management, global issues.
- **Business studies:** Entrepreneurship, sustainability.

Sustainable tourism through art (target 15.2)

Students will explore the concept of sustainable tourism through artistic expression. By creating visual representations of responsible travel and accommodation, students will develop a deeper understanding of the impact of tourism on the environment and the importance of preserving natural resources.

For primary schools

Activities

- **Understanding tourism:** Students will learn about different types of tourism, such as beach holidays, adventure tourism, and cultural tourism. They will discuss the positive and negative impacts of tourism on local communities and the environment.
- **Sustainable tourism exploration:** Students will explore the concept of sustainable tourism, focusing on activities that minimise environmental impact and support local

communities. They can learn about eco-friendly practices, such as recycling, energy conservation, and protecting wildlife.

- **Art creation:** Students will create artworks that represent sustainable tourism. They can use a variety of materials like paint, recycled materials, or natural materials to create posters, models, or murals.
- **Community sharing:** Students will share their artworks with the school community, explaining the importance of sustainable tourism and the role they can play as responsible tourists.

Resources

- Art supplies (paint, brushes, recycled materials, etc.)
- Images and information about different types of tourism
- Information about sustainable tourism practices

Links to the art and design curriculum

- Painting
- Poster design
- Mixed media

Cross-curricular links

- Geography: Tourism, environmental impact, sustainable development.
- Citizenship: Global citizenship, environmental responsibility.

For secondary schools

Activities

- **Research:** Students will research the tourism industry, focusing on its economic, social, and environmental impacts. They will investigate the concept of sustainable tourism and explore case studies of successful sustainable resorts.
- **Design thinking:** Students will develop ideas for sustainable tourism initiatives, such as eco-friendly accommodation, responsible travel, and community involvement.
- **Art and technology:** Students can use a variety of art forms, including digital media, to create visual representations of their sustainable tourism concepts. They can develop websites, social media campaigns, or multimedia presentations.
- **Community engagement:** Students can collaborate with local tourism businesses or environmental organisations to promote sustainable tourism. They can organise awareness campaigns or create public art installations.
- **Evaluation and reflection:** Students will assess the effectiveness of their artworks in raising awareness and inspiring action.

Resources

- Access to information about the tourism industry and sustainable tourism
- Art supplies and technology equipment
- Potential guest speakers from the tourism industry or environmental organisations
- Opportunities for field trips to local tourist destinations

Links to the art and design curriculum

- Digital media
- Graphic design
- Multimedia

Cross-curricular links

- Geography: Tourism, environmental management, economic geography.
- Business Studies: Marketing, entrepreneurship, sustainability.

Mathematics

Upskilling the water-related workforce (target 1.3)

Students will explore the concept of workforce development in the water-related economy through data analysis. By tracking and visualising changes in the skills of the water-related workforce, students will develop a deeper understanding of the importance of education and training for sustainable ocean management.

For secondary schools

Activities

- **Understanding the Blue Economy:** Students will learn about the different sectors of the blue economy, such as fisheries, aquaculture, marine tourism, and renewable energy.
- **Data collection:** Students will gather data on the European blue workforce, focusing on employment numbers, skill sets, and training opportunities. Various online databases and reports can be used as data sources.
- **Data analysis:** Students will analyse the collected data to identify trends in employment, skill development, and upskilling or reskilling needs. They will calculate percentage increases and decreases in specific skill areas over time.
- **Data visualisation:** Students will create charts, graphs, and other visual representations to communicate their findings effectively. They can use spreadsheet software or specialised data visualisation tools.
- **Presentation:** Students will present their findings to the class, explaining their methodology and the implications of their results for the blue economy.

Resources

- Access to computers and internet
- Spreadsheet software (e.g., Microsoft Excel, Google Sheets)
- Data visualisation tools (optional, e.g., Tableau, Power BI)
- Relevant data sources (e.g., Eurostat, OECD)

Links to the mathematics curriculum

- Data handling

- Statistics
- Probability
- Graphical representation

Cross-curricular links

- **Geography:** Economic geography, the blue economy, sustainable development.
- **ICT:** Data analysis, spreadsheet software, presentation skills.

Note: For a primary school version, the focus could be narrowed down to a specific local blue economy sector (e.g., fishing, tourism) and the data could be simplified to focus on job roles rather than specific skills. Students could create simple charts or graphs to show changes in employment numbers over time.

Hydro-Morphological Trends Analysis (target 5.2)

Students will use mathematical models to track the progress of a local river restoration project. Through engaging activities, they will learn about data collection, graphing, and basic statistical analysis.

For primary schools

Activities

- **Data collection:** Students will collect data on water quality, river flow, and wildlife observations before and after the restoration project.
- **Graphing:** Students will create graphs to visualise the data, such as line graphs to show changes in water quality over time.
- **Simple statistics:** Students will calculate basic statistics, such as averages and ranges, to analyse the data.
- **Presentation:** Students will present their findings to their class or community, explaining their data collection and analysis process.

Resources

- Data collection tools (e.g., water testing kits, thermometers)
- Graphing paper or software
- Calculators or spreadsheets
- Presentation materials (e.g., posters, PowerPoint)

Links to the mathematics curriculum

- Data collection
- Graphing
- Basic statistics

Cross-curricular links

- Science: Understanding water quality, ecosystems, and environmental restoration
- Geography: Exploring local environments and human-environment interactions

For secondary schools

Activities

- **Data collection and analysis:** Students will collect and analyse data on river flow, water quality, sediment transport, and habitat conditions before and after the restoration project.
- **Mathematical modelling:** Students will develop and apply mathematical models to simulate the hydrological and morphological processes of the river.
- **Statistical analysis:** Students will use statistical techniques to test hypotheses and quantify the impact of the restoration project.
- **Visualisation:** Students will create visualisations, such as maps and charts, to illustrate the changes in the river's condition over time.

Resources

- Data collection equipment (e.g., flow metres, water quality probes)
- Mathematical modelling software (e.g., R, Python)
- Statistical software (e.g., SPSS, Excel)
- Visualisation tools (e.g., GIS, graphing software)

Links to the mathematics curriculum

- Data analysis
- Statistics
- Mathematical modelling

Cross-curricular links

- Science: Hydrology, environmental science, ecology
- Geography: Geographic information systems, environmental management
- Computer science: Programming and data visualisation

Optimising Fertiliser Application (target 8.2)

Students will learn about precision agriculture and how it can help reduce fertiliser use and protect our water resources. Through hands-on activities, they will explore the relationship between soil, plants, and fertiliser.

For primary schools

Activities

- **Soil testing:** Students will test their school garden soil to determine its nutrient content.
- **Plant growth experiment:** Students will conduct experiments to see how different amounts of fertilisers affect plant growth.
- **Data analysis:** Students will record their observations and create graphs to visualise the data.
- **Presentation:** Students will present their findings to their class or community, explaining the importance of precision agriculture.

Resources

- Soil testing kits
- Gardening supplies (e.g., plants, seeds, fertiliser)
- Graphing paper or software
- Presentation materials (e.g., posters, PowerPoint)

Links to the mathematics curriculum

- Data collection
- Graphing
- Basic statistics

Cross-curricular links

- Science: Understanding plants, soil, and ecosystems
- Geography: Exploring agriculture and land use

For secondary schools

Activities

- **Data collection and analysis:** Students will collect and analyse data on soil properties, crop yields, fertiliser application rates, and environmental factors.
- **Mathematical modelling:** Students will develop and apply mathematical models to simulate the relationship between fertiliser application, crop growth, and environmental impacts.
- **Optimization:** Students will use optimization techniques to identify the optimal fertiliser application rates for different soil types and crops.
- **Scenario analysis:** Students will conduct scenario analysis to explore the potential impacts of different fertiliser management strategies on crop yields, water quality, and greenhouse gas emissions.

Resources

- Data collection equipment (e.g., soil testers, yield monitors)
- Mathematical modelling software
- Statistical software
- Presentation materials (e.g., PowerPoint, posters)

Links to the mathematics curriculum

- Data analysis
- Statistics
- Mathematical modelling

Cross-curricular links

- Science: Soil science, agriculture, environmental science
- Geography: Geographic information systems, land use planning
- Economics: Agricultural economics, environmental economics

Mathematical Models for Market Growth Prediction (target 14.2)

Students will explore the world of blue biotech, a growing industry that uses marine organisms to create new products. Through fun activities, they will learn about the potential of this industry and its impact on our lives.

For primary schools

Activities

- **Research:** Students will research different blue biotech products, such as medicines, food additives, and biofuels.
- **Data collection:** Students will collect data on the growth of the blue biotech industry over the past few years.
- **Graphing:** Students will create graphs to visualise the data, such as line graphs to show the growth of the industry.
- **Prediction:** Students will make predictions about the future growth of the blue biotech industry based on their analysis.

Resources

- Books and articles about blue biotech
- Data collection tools (e.g., spreadsheets, online databases)
- Graphing paper or software
- Presentation materials (e.g., posters, PowerPoint)

Links to the mathematics curriculum

- Data collection
- Graphing
- Basic statistics

Cross-curricular links

- Science: Understanding marine ecosystems and biodiversity
- Geography: Exploring oceans and human-environment interactions

For secondary schools

Activities

- **Data collection and analysis:** Students will collect and analyse data on the blue biotech market, including investment trends, product development, and regulatory changes.
- **Mathematical modelling:** Students will develop and apply mathematical models to predict the future growth of the industry, considering factors such as market demand, technological advancements, and regulatory policies.
- **Scenario analysis:** Students will conduct scenario analysis to explore different potential futures for the blue biotech industry and assess the associated risks and opportunities.
- **Economic and environmental impact assessment:** Students will evaluate the potential economic and environmental impacts of the blue biotech industry, considering factors such as job creation, resource use, and pollution.

Resources

- Data collection tools (e.g., market research reports, financial data)
- Mathematical modelling software
- Statistical software
- Presentation materials (e.g., PowerPoint, posters)

Links to the mathematics curriculum

- Data analysis
- Statistics
- Mathematical modelling

Cross-curricular links

- Science: Marine science, biotechnology, environmental science
- Economics: Economic forecasting, environmental economics
- Geography: Geographic information systems, sustainable development

Geography

Mapping blue skills (target 1.3.)

Students research and map the geographical distribution of workers in the European blue workforce, exploring how different regions contribute to the overall goal of upskilling and reskilling workers and analysing the factors influencing their concentration in certain regions. The aim is to understand the vital role water plays in our lives and the importance of a skilled workforce to protect our water resources.

For primary schools

Activities

- **Research:** Investigate the different types of jobs in the blue workforce, such as marine biologists, oceanographers, and water engineers.
- **Map:** Create a simple map of Europe, highlighting regions with a high concentration of workers in the blue workforce.
- **Interview:** Conduct interviews with local experts or community members involved in water-related activities to learn about their work and the challenges they face.

Resources

- Maps of Europe
- Books or articles about the blue workforce
- Internet access
- Art supplies (markers, crayons, paper)

Links to the Geography curriculum

- Maps and location
- Blue economy
- Regional development

Cross-curricular links

- Language: Research, writing, and communication
- Art: Design and creativity

For secondary schools

Activities

- **Research:** Conduct in-depth research on the blue workforce, including the types of jobs, skills required, and the challenges faced by workers in different regions.
- **Data Analysis:** Use geographic information systems (GIS) or other data analysis tools to map the distribution of upskilled and re-skilled workers across Europe.
- **Case Studies:** Analyse case studies of successful blue workforce initiatives in different countries, identifying factors contributing to their success.
- **Policy Analysis:** Evaluate existing policies and regulations related to the blue workforce.
- **Interview:** Conduct interviews with local experts or community members involved in water-related activities to learn about their work and the challenges they face.

Resources

- Maps of Europe or Geographic information systems (GIS) software
- Access to databases and research articles about the blue workforce
- Internet access

Links to the Geography curriculum

- Economic geography
- Environmental issues
- GIS, mapping and spatial analysis
- Blue economy
- Regional development

Cross-curricular links

- Economics: Labor markets, skills development, and policy analysis
- Science: Marine biology, oceanography, and environmental science
- Language: Research, writing, and presentation skills

Mapping Marine Protected Areas (target 3.1.)

Students create an atlas highlighting the geographical distribution of Marine Protected Areas (MPAs) in EU waters. They research and design maps that showcase the areas under protection, emphasising the importance of preserving marine ecosystems and exploring their effectiveness, and the challenges they face.

For primary schools

Activities

- **Research:** Learn about marine protected areas (MPAs) and why they are important for preserving marine ecosystems.
- **Map:** Create a simple map of Europe, highlighting the locations of MPAs in EU waters.
- **Create:** Design and decorate their own marine protected area, including different types of marine life and habitats.
- **Present:** Share their findings and creations with the class, explaining the importance of protecting marine ecosystems.

Resources

- Maps of Europe
- Books or articles about marine protected areas
- Internet access
- Art supplies (markers, crayons, paper)
- Building materials (cardboard, straws, plastic bottles)

Links to the Geography curriculum

- Maps and location
- Environmental geography

Cross-curricular links

- Science: Marine life, ecosystems, and conservation
- English: Research, writing, and communication
- Art: Design and creativity

For secondary schools

Activities

- **Research:** Conduct in-depth research on MPAs, including their designation criteria, management practices, and effectiveness in protecting marine ecosystems.
- **Data Analysis:** Use geographic information systems (GIS) or other data analysis tools to map the distribution of MPAs in EU waters and analyse their coverage.
- **Case Studies:** Analyse case studies of successful and less successful MPAs, identifying factors contributing to their success or failure.
- **Policy Analysis:** Evaluate existing policies and regulations related to MPAs and how they could be improved.

Resources

- Maps of Europe or Geographic information systems (GIS) software
- Access to databases and research articles about the blue workforce
- Internet access

Links to the Geography curriculum

- Environmental geography
- GIS, mapping and spatial analysis

Cross-curricular links

- Economics: Environmental economics, resource management, and policy analysis
- Science: Marine biology, oceanography, and conservation
- Language: Research, writing, and presentation skills

Rejuvenated Seabed Maps (target 4.1.)

Students create maps showcasing the locations where seabed habitats have been regenerated. The project involves geographical analysis, map design, and the presentation of before-and-after scenarios, emphasising the positive impact of habitat restoration on local ecosystems.

For primary schools

Activities

- **Research:** Learn about seabed habitats and the impact of human activities on their degradation.
- **Map:** Create a simple map of the world, highlighting areas where seabed habitats have been successfully regenerated.
- **Create:** Design and build a model of a restored seabed habitat, including different types of marine life and plants.
- **Present:** Share their findings and creations with the class, explaining the importance of habitat restoration for ocean health.

Resources

- Maps of the world
- Books or articles about seabed habitats and restoration
- Internet access
- Art supplies (markers, crayons, paper)
- Building materials (cardboard, straws, plastic bottles)

Links to the Geography curriculum

- Maps and location
- Environmental geography

Cross-curricular links

- Science: Marine life, ecosystems, and conservation
- English: Research, writing, and communication
- Art: Design and creativity

For secondary schools

Activities

- **Research:** Conduct in-depth research on seabed habitat restoration projects, including their methods, scale, and success metrics.
- **Data Analysis:** Use geographic information systems (GIS) or other data analysis tools to map the locations of restored seabed habitats and analyse their distribution.
- **Case Studies:** Analyse case studies of successful and less successful restoration projects, identifying factors contributing to their success or failure.
- **Policy Analysis:** Evaluate existing policies and regulations related to seabed habitat restoration and propose potential improvements.

Resources

- Maps of Europe or Geographic information systems (GIS) software
- Access to databases and research articles about the blue workforce
- Internet access

Links to the Geography curriculum

- Environmental geography
- GIS, mapping and spatial analysis

Cross-curricular links

- Economics: Environmental economics, resource management, and policy analysis
- Science: Marine biology, oceanography, and conservation
- English: Research, writing, and presentation skills

Eco-Resilience Chronicles (target 4.2)

Students will delve into the fascinating world of water and discover how nature can help us protect this precious resource. Through engaging activities, they will learn about the importance of ecosystems in providing clean water, preventing flooding, and supporting biodiversity.

For primary schools

Activities

- **Local water exploration:** Students will explore their local environment to identify sources of water (e.g., rivers, ponds, wells) and observe how they are used by plants, animals, and people.
- **Water cycle experiment:** Students will create a miniature water cycle model to understand the different stages of the water cycle and how it affects their local environment.
- **Nature-based solutions:** Students will research and discuss examples of nature-based solutions for water management, such as wetlands, rain gardens, and tree planting.
- **Water conservation pledge:** Students will create a personal water conservation pledge and share it with their classmates.

Resources

- Books and articles about water, ecosystems, and nature-based solutions
- Water cycle diagrams and models
- Local maps and guides to natural areas
- Gardening supplies (e.g., seeds, soil) for creating mini ecosystems

Links to the geography curriculum

- Exploring local environments
- Natural resources
- Human-environment interactions

Cross-curricular links

- Science: Understanding the water cycle, ecosystems, and biodiversity
- English: Writing and presenting information, creating persuasive arguments

For secondary schools

Activities

- **Case study analysis:** Students will select case studies from different regions (e.g., coastal areas, mountainous regions, arid environments) to analyse how geographic factors (e.g., climate, topography, biodiversity) impact water availability, quality, and management.
- **Data collection and analysis:** Students will collect and analyse data on water quality, precipitation patterns, and land use changes in their local area.
- **Nature-based solution design:** Students will design a nature-based solution for a specific water-related challenge in their community, considering factors such as cost-effectiveness, sustainability, and ecological benefits.
- **Community engagement:** Students will present their findings and recommendations to local stakeholders, such as community leaders, environmental organisations, and government officials.

Resources

- Geographic information system (GIS) software
- Scientific journals and articles on water resources and environmental management
- Data sources (e.g., government agencies, environmental organisations)
- Presentation software (e.g., PowerPoint)

Links to the geography curriculum

- Human-environment interactions
- Natural resource management
- Geographic data analysis

Cross-curricular links

- Science: Ecology, environmental science, climate change
- Mathematics: Data analysis and statistics
- English: Research, writing, and presentation skills

De-dammed Rivers Expedition (target 5.1)

Students will embark on a virtual or field expedition to explore rivers where dams have been removed. Through engaging activities, they will learn about the benefits of de-damming for rivers, wildlife, and local communities.

For primary schools

Activities

- **Virtual river tour:** Students will watch videos or use online tools to explore de-dammed rivers from around the world. They will identify key geographical features, such as meanders, floodplains, and wetlands.
- **River ecosystem research:** Students will research the types of plants and animals that thrive in de-dammed rivers and create fact sheets or posters about these species.
- **Community interviews:** Students will interview local people who have been affected by de-damming. They will learn about the positive and negative impacts of dam removal on their lives and communities.
- **River restoration project:** Students will create a miniature river model and design a restoration plan to improve the health of their local river.

Resources

- Online videos and articles about de-damming and river restoration
- Maps and satellite images of de-dammed rivers
- Books and resources about river ecosystems and wildlife
- Gardening supplies (e.g., plants, soil) for creating miniature river models

Links to the geography curriculum

- Exploring rivers
- Landscapes
- Human-environment interactions

Cross-curricular links

- Science: Understanding ecosystems, biodiversity, and water cycles
- Language: Writing, speaking, and presenting information

For secondary schools

Activities

- **Fieldwork:** Students will visit a de-dammed river to observe its physical features, collect water samples, and conduct ecological surveys.
- **Data analysis:** Students will analyse data on water quality, sediment transport, and biodiversity before and after dam removal.
- **Community impact assessment:** Students will interview residents, businesses, and government officials to assess the social and economic impacts of de-damming.
- **Policy analysis:** Students will evaluate the effectiveness of policies and regulations related to dam removal and propose recommendations for future river restoration projects.

Resources

- Scientific journals and articles on river restoration and dam removal
- Geographic information system (GIS) software
- Data sources (e.g., government agencies, environmental organisations)
- Field equipment (e.g., water testing kits, GPS devices)

Links to the geography curriculum

- Human-environment interactions
- Natural resource management
- Geographic data analysis

Cross-curricular links

- Science: Ecology, environmental science, water resources
- Mathematics: Data analysis and statistics
- Language: Research, writing, and presentation skills

Waterscape Revival Expedition (target 5.2)

Students will become environmental scientists, documenting the restoration of a local surface water body. Through hands-on activities, they will learn about the importance of water conservation, habitat restoration, and community involvement.

For Primary Schools

Activities

- **River walk:** Students will take regular walks along the restored river, observing changes in the landscape, wildlife, and water quality.
- **Nature journaling:** Students will create nature journals to record their observations, drawings, and thoughts about the river restoration project.
- **Wildlife surveys:** Students will conduct simple wildlife surveys to identify the types of plants and animals that are returning to the restored area.
- **Community interviews:** Students will interview residents to learn about their experiences with the river restoration project and the benefits they have observed.

Resources

- Nature journals and field guides
- Cameras or smartphones for taking photos
- Water quality testing kits (if appropriate)
- Local maps and guides to the restored area

Links to the geography curriculum

- Exploring local environments
- Human-environment interactions
- Environmental change

Cross-curricular links

- Science: Understanding ecosystems, biodiversity, and water cycles
- Language: Writing, drawing, and presenting information

For secondary schools

Activities

- **Fieldwork:** Students will conduct regular fieldwork to monitor changes in water quality, sediment transport, and biodiversity.
- **Data analysis:** Students will use statistical methods to analyse data collected over time and identify trends and patterns.
- **Community engagement:** Students will interview residents, businesses, and government officials to assess the social and economic benefits of the restoration project.
- **Policy evaluation:** Students will evaluate the effectiveness of policies and regulations related to water restoration and propose recommendations for future projects.

Resources

- Scientific journals and articles on water restoration and environmental management
- Geographic information system (GIS) software
- Data sources (e.g., government agencies, environmental organisations)
- Field equipment (e.g., water testing kits, GPS devices)

Links to the geography curriculum

- Human-environment interactions
- Natural resource management
- Geographic data analysis

Cross-curricular links

- Science: Ecology, environmental science, water resources
- Mathematics: Data analysis and statistics
- English: Research, writing, and presentation skills

Plastic-Free Culture Exploration (target 7.2)

Students will explore the cultural impact of reducing single-use plastic consumption. Through creative activities and research, they will learn about the importance of sustainability and the positive changes that can occur when communities work together.

For primary schools

Activities

- **Plastic scavenger hunt:** Students will go on a scavenger hunt to find different types of plastic items in their school or community. They will discuss the impact of these items on the environment.
- **Cultural comparisons:** Students will compare the use of plastic in different cultures around the world. They will learn about traditional ways of living and sustainable practices.

- **Plastic alternatives:** Students will create or research alternative materials that can replace single-use plastics. They will experiment with these materials to see how they can be used in everyday life.
- **Community action:** Students will plan and implement a community-based project to reduce plastic waste. This could involve organising a plastic cleanup, starting a recycling program, or creating awareness campaigns.

Resources

- Books and articles about plastic pollution and sustainability
- Maps and information about different cultures around the world
- Craft supplies for creating plastic alternatives
- Cameras or smartphones for documenting community projects

Links to the geography curriculum

- Exploring different cultures
- Environments
- Human-environment interactions

Cross-curricular links

- Science: Understanding ecosystems, pollution, and sustainability
- Language: Writing, speaking, and presenting information
- Art: Creating and designing sustainable products

For secondary schools

Activities

- **Qualitative research:** Students will conduct interviews with individuals from different cultural backgrounds to explore their attitudes, beliefs, and behaviours related to plastic consumption.
- **Case study analysis:** Students will analyse case studies of communities or countries that have successfully implemented plastic reduction measures. They will identify the cultural factors that contributed to their success.
- **Cultural anthropology:** Students will explore the concept of cultural adaptation and examine how societies have historically adapted to new challenges and technologies.
- **Policy analysis:** Students will analyse government policies and regulations related to plastic reduction and evaluate their effectiveness in promoting cultural change.

Resources

- Academic journals and articles on cultural anthropology, sustainability, and consumer behaviour
- Online databases for finding research papers and interviews
- Interview guides and consent forms
- Presentation software (e.g., PowerPoint)

Links to the geography curriculum

- Human-environment interactions

- Cultural geography
- Globalisation

Cross-curricular links

- Sociology: Social change, consumer culture, community development
- English: Research, writing, and presentation skills
- Economics: Market dynamics, sustainability economics

Agricultural Sustainability Case Studies (target 8.2)

Students will explore the importance of nutrient reduction in agriculture and discover how sustainable farming practices can help protect our water resources. Through hands-on activities and research, they will learn about the impact of nutrient pollution and the benefits of responsible farming.

For primary schools

Activities

- **Nutrient pollution experiment:** Students will conduct a simple experiment to demonstrate how excess nutrients can pollute water. They will learn about the harmful effects of nutrient pollution on aquatic ecosystems.
- **Sustainable farming techniques:** Students will research and discuss sustainable farming practices that can help reduce nutrient losses, such as crop rotation, cover crops, and precision agriculture.
- **Local farm visit:** Students will visit a local farm that uses sustainable practices. They will learn about the benefits of these practices for both farmers and the environment.
- **Community awareness campaign:** Students will create a community awareness campaign to educate others about the importance of nutrient reduction in agriculture.

Resources

- Books and articles about nutrient pollution and sustainable agriculture
- Science experiment materials (e.g., soil, water, fertilisers)
- Maps and information about local farms
- Presentation materials (e.g., posters, PowerPoint)

Links to the geography curriculum

- Exploring land use
- Human-environment interactions
- Environmental issues

Cross-curricular links

- Science: Understanding ecosystems, pollution, and agriculture
- Geography: English: Writing, speaking, and presenting information
- Art: Creating and designing educational materials

For secondary schools

Activities

- **Geographical analysis:** Students will use geographic information systems (GIS) to analyse the spatial distribution of agricultural land, nutrient pollution, and water quality in different regions.
- **Case study research:** Students will conduct in-depth case studies of regions that have successfully implemented nutrient reduction measures. They will evaluate the effectiveness of these measures and identify the factors that contributed to their success.
- **Policy analysis:** Students will analyse government policies and regulations related to agriculture and water quality. They will evaluate the effectiveness of these policies in promoting nutrient reduction and sustainable farming practices.
- **Global trends:** Students will examine global trends in agricultural production, nutrient use, and water pollution. They will identify emerging challenges and opportunities for sustainable agriculture.

Resources

- Geographic information system (GIS) software
- Scientific journals and articles on nutrient pollution, sustainable agriculture, and water quality
- Data sources (e.g., government agencies, environmental organisations)
- Presentation materials (e.g., PowerPoint, posters)

Links to the geography curriculum

- Human-environment interactions
- Land use
- Geographic data analysis

Cross-curricular links

- Science: Ecology, environmental science, agriculture
- Economics: Agricultural economics, sustainability economics
- Language: Research, writing, and presentation skills

Land-Based Treatment Facilities Mapping (target 8.4)

Students will become marine scientists, exploring the geographical distribution of land-based treatment facilities for ship waste waters in European waters. Through hands-on activities and research, they will learn about the importance of clean oceans and the impact of pollution on marine life.

For primary schools

Activities

- **Ocean exploration:** Students will watch videos or use online tools to explore different marine environments and learn about the types of marine life that live there.

- **Ship wastewater research:** Students will research the different types of waste produced by ships and the harmful effects of this waste on the ocean.
- **Map creation:** Students will create simple maps showing the location of land-based treatment facilities in European waters. They will discuss the importance of these facilities in protecting marine environments.
- **Ocean conservation pledge:** Students will create a pledge to help protect the ocean and reduce pollution. They will share their pledge with their classmates and community.

Resources

- Books and articles about marine pollution and ocean conservation
- Maps of European waters
- Online videos and resources about marine life and ecosystems
- Presentation materials (e.g., posters, PowerPoint)

Links to the geography curriculum

- Exploring oceans maps
- Human-environment interactions

Cross-curricular links

- Science: Understanding ecosystems, pollution, and marine life
- Language: Writing, speaking, and presenting information
- Art: Creating and designing maps and educational materials

For secondary schools

Activities

- **Geographical analysis:** Students will use geographic information systems (GIS) to analyse the spatial distribution of land-based treatment facilities, shipping routes, and marine protected areas.
- **Data analysis:** Students will collect and analyse data on ship traffic, wastewater discharges, and marine pollution levels.
- **Case study research:** Students will conduct case studies of specific regions or countries to examine the effectiveness of their land-based treatment facilities and the impact on marine environments.
- **Policy evaluation:** Students will analyse government policies and regulations related to ship wastewater management. They will evaluate the effectiveness of these policies and propose recommendations for improvement.

Resources

- Geographic information system (GIS) software
- Data sources (e.g., maritime organisations, environmental agencies)
- Scientific journals and articles on marine pollution and shipping
- Presentation materials (e.g., PowerPoint, posters)

Links to the geography curriculum

- Human-environment interactions

- Maritime geography
- Geographic data analysis

Cross-curricular links

- Science: Marine science, environmental science, pollution
- Economics: Maritime economics, environmental economics
- Language: Research, writing, and presentation skills

Marine Sustainability Case Studies (target 9.1)

Students will learn about the importance of marine sustainability and explore inspiring examples of conservation efforts from around the world. Through research and creative activities, they will understand the impact of human activities on the ocean and the steps we can take to protect it.

For primary schools

Activities

- **Ocean exploration:** Students will watch videos or use online resources to learn about different marine environments and the creatures that live there.
- **Case study research:** Students will research specific marine sustainability initiatives, such as marine protected areas, sustainable fishing practices, or pollution cleanup efforts.
- **Creative projects:** Students will create projects, such as posters, models, or stories, to share their knowledge about marine sustainability.
- **Community action:** Students will brainstorm ways to help protect the ocean in their local community, such as organising a beach cleanup or reducing plastic waste.

Resources

- Books and articles about marine conservation
- Videos and documentaries about the ocean
- Maps and information about different marine environments
- Crafting supplies for creating projects

Links to the geography curriculum

- Exploring oceans
- Maps
- Human-environment interactions

Cross-curricular links

- Science: Understanding marine ecosystems, biodiversity, and pollution
- English: Writing, speaking, and presenting information
- Art: Creating and designing projects

For secondary schools

Activities

- **Geographical analysis:** Students will use geographic information systems (GIS) to analyse the spatial distribution of marine protected areas, fishing grounds, and pollution hotspots.
- **Case study research:** Students will conduct in-depth case studies of specific marine sustainability initiatives, evaluating their effectiveness, impact, and lessons learned.
- **Policy analysis:** Students will analyse government policies and international agreements related to marine conservation. They will evaluate their effectiveness and propose recommendations for improvement.
- **Community engagement:** Students will engage with local stakeholders, such as marine scientists, fishermen, and conservation organisations, to discuss marine sustainability issues and potential solutions.

Resources

- Geographic information system (GIS) software
- Scientific journals and articles on marine conservation
- Data sources (e.g., government agencies, environmental organisations)
- Presentation materials (e.g., PowerPoint, posters)

Links to the geography curriculum

- Human-environment interactions
- Maritime geography
- Geographic data analysis

Cross-curricular links

- Science: Marine science, environmental science, ecology
- Economics: Environmental economics, sustainable development
- English: Research, writing, and presentation skills

Micro-Pollutant Reduction Case Studies (target 9.4)

Students will learn about the importance of clean water and the impact of micro-pollutants on our environment. Through research and creative activities, they will explore successful initiatives to reduce micro-pollutant levels in wastewater treatment plants.

For primary schools

Activities

- **Water pollution experiment:** Students will conduct a simple experiment to demonstrate how micro-pollutants can contaminate water.
- **Wastewater treatment plant visit:** Students will visit a local wastewater treatment plant to learn about the processes involved in cleaning wastewater.
- **Case study research:** Students will research successful initiatives to reduce micro-pollutants in wastewater treatment plants from different regions.
- **Community action:** Students will brainstorm ways to reduce micro-pollutant pollution in their community, such as promoting water conservation or using environmentally friendly products.

Resources

- Books and articles about water pollution and wastewater treatment
- Videos and documentaries about water conservation
- Maps and information about local wastewater treatment plants
- Crafting supplies for creating projects

Links to the geography curriculum

- Exploring local environments
- Human-environment interactions

Cross-curricular links

- Science: Understanding water pollution, ecosystems, and environmental health
- English: Writing, speaking, and presenting information
- Art: Creating and designing projects

For secondary schools

Activities

- **Geographical analysis:** Students will use geographic information systems (GIS) to analyse the spatial distribution of wastewater treatment plants, population density, and industrial activities.
- **Case study research:** Students will conduct in-depth case studies of specific initiatives that have achieved a 50% reduction in micro-pollutants. They will evaluate the effectiveness of these initiatives, identify lessons learned, and assess their applicability to other regions.
- **Policy analysis:** Students will analyse government policies and regulations related to wastewater treatment and micro-pollutant control. They will evaluate their effectiveness and propose recommendations for improvement.
- **Community engagement:** Students will engage with local stakeholders, such as wastewater treatment plant operators, environmental organisations, and community members, to discuss micro-pollutant mitigation strategies.

Resources

- Geographic information system (GIS) software
- Scientific journals and articles on wastewater treatment and micro-pollutant control
- Data sources (e.g., government agencies, environmental organisations)
- Presentation materials (e.g., PowerPoint, posters)

Links to the geography curriculum

- Human-environment interactions
- Geographic data analysis
- Environmental management

Cross-curricular links

- Science: Environmental science, chemistry, biology
- Economics: Environmental economics, public policy

- English: Research, writing, and presentation skills

Mapping Noise Mitigation Measures in European Marine Regions (target 10.2)

Students will learn about the importance of a quiet ocean and explore the different ways we can reduce noise pollution. Through research and creative activities, they will understand the impact of noise on marine life and the steps we can take to protect our seas.

For primary schools

Activities

- **Ocean sounds:** Students will listen to different sounds of the ocean and discuss how noise pollution can disrupt marine life.
- **Noise mitigation techniques:** Students will research and discuss different noise mitigation techniques, such as using quieter ships and reducing underwater construction.
- **Creative projects:** Students will create projects, such as posters or models, to raise awareness about noise pollution and its impact on the ocean.
- **Community action:** Students can brainstorm ways to reduce noise pollution in their local community, such as encouraging people to be mindful of noise levels near the coast.

Resources

- Books and articles about marine noise pollution
- Sound recordings of ocean noise
- Images and videos of marine life
- Crafting supplies for creating projects

Links to the geography curriculum

- Exploring oceans
- Maps
- Human-environment interactions

Cross-curricular links

- Science: Understanding marine ecosystems, sound pollution, and environmental protection
- English: Writing, speaking, and presenting information
- Art: Creating and designing projects

For secondary schools

Activities

- **Geographical analysis:** Students will use geographic information systems (GIS) to map the distribution of marine protected areas, shipping routes, and underwater construction sites.

- **Case study research:** Students will conduct in-depth case studies of specific noise mitigation initiatives, such as the development of quieter ships or the implementation of noise-reduction zones.
- **Policy analysis:** Students will analyse European Union policies and regulations related to marine noise pollution. They will evaluate their effectiveness and propose recommendations for improvement.
- **Community engagement:** Students will engage with local stakeholders, such as marine scientists, fishermen, and shipping companies, to discuss noise mitigation strategies and potential challenges.

Resources

- Geographic information system (GIS) software
- Scientific journals and articles on marine noise pollution
- Data sources (e.g., maritime organisations, environmental agencies)
- Presentation materials (e.g., PowerPoint, posters)

Links to the geography curriculum

- Human-environment interactions
- Maritime geography
- Geographic data analysis

Cross-curricular links

- Science: Marine science, environmental science, acoustics
- Economics: Environmental economics, transportation economics
- English: Research, writing, and presentation skills

Information and communications technology (ICT)

Making an educational game (target 1.1)

Students design and develop an interactive platform or application to teach others about water. The project involves coding, data integration, and user interface design, providing a user-friendly tool for exploring and understanding the intricate details of our planet's water systems.

For secondary schools

Activities

- Research the water cycle and different water bodies (rivers, oceans, lakes, etc.) or water-related challenges such as pollution, water scarcity, and climate change impacts.
- Create characters and storylines for the game or animation.

- Design interactive elements and puzzles related to the topics, for example for the water cycle it could include drag and drop clouds to create rain, match water sources to their uses.
- Develop basic coding skills using a visual programming language like Scratch to bring the game or animation to life.
- Test and refine the final product through playtesting with classmates.

Resources

- Computers with access to educational coding software (e.g., Scratch)
- Art materials for character and scene design
- Access to water cycle information and images
- Projector or interactive whiteboard for group presentations

Cross-curricular links

- Science: Water cycle, habitats, climate change
- Computing: Digital literacy, algorithms, problem-solving
- Art and Design: Creativity, storytelling, digital media

Smart Fishing Tech Symposium (target 6.3)

Students organise a symposium focusing on the ICT solutions employed in controlling catches, inviting experts to discuss the impact of technology on sustainable fishing practices, fostering ongoing discussions within the school community over several months.

For secondary schools

Activities

- Research different ICT solutions used in the fishing industry (e.g., satellite tracking, underwater drones, artificial intelligence)
- Develop a symposium agenda and invite speakers
- Prepare questions for experts (marine biologist) and facilitate discussions
- Create promotional materials (e.g., posters, social media campaigns) to engage the school community

Resources

- Access to the internet for research and communication
- Audio-visual equipment for the symposium
- Contact information for potential speakers
- Venue for the symposium
- Support from school staff (e.g., teachers, technicians)

Cross-curricular links

- Geography: Global patterns of resource consumption, environmental challenges
- Science: Ecosystems, biodiversity, technology and society
- Citizenship: Global citizenship, environmental awareness
- Business Studies: Entrepreneurship, marketing, event management

Ethics

Water Guardians' Dilemma (target 2.2)

This project aims to develop students' critical thinking and ethical reasoning skills through an exploration of the ethical implications of centralised water observation. Students will analyse the potential benefits and risks of making water data accessible to all, considering issues such as privacy, environmental justice, and responsible data use.

For primary schools

Activities

- **Understanding water:** Discuss the importance of water for people, animals, and plants. Explore where water comes from and how it is used.
- **Sharing information:** Introduce the concept of sharing information. Use simple examples (e.g., sharing toys, sharing food) to discuss the benefits and drawbacks of sharing.
- **Water data:** Explain that water data can help us understand water availability and use. Discuss how this information can be helpful (e.g., finding water shortages, protecting water sources).
- **Ethical considerations:** Introduce the idea of fairness and equality. Discuss how sharing water data can be fair to everyone (e.g., helping people who need water) but also unfair (e.g., people might use too much water).
- **Making decisions:** Encourage students to think about the pros and cons of sharing water data. Help them understand that there is no easy answer, and that different people might have different opinions.

Resources

- Pictures or videos of water sources and water use
- Storybooks or picture books about sharing
- Large paper or whiteboard for brainstorming and mind mapping

Cross-curricular links

- Personal, Social, Health Education (PSHE): Understanding feelings, making choices, respecting others
- Geography: Water cycle, water resources, human-environment interaction
- Science: Water properties, water pollution

For secondary schools

Activities

- **Understanding water data:** Introduce students to the concept of centralised water observation and the types of data collected (e.g., water quality, water levels, water usage).
- **Benefits of data sharing:** Discuss the potential benefits of making water data accessible to the public (e.g., improving water management, supporting research, empowering communities).
- **Risks of data sharing:** Explore the potential risks associated with data sharing (e.g., privacy concerns, misuse of data, unequal access to information).
- **Ethical frameworks:** Introduce ethical frameworks (e.g., utilitarianism, deontology) and apply them to water data sharing.
- **Case studies:** Analyse real-world case studies to illustrate the ethical dilemmas involved in water data management.
- **Developing ethical guidelines:** Work collaboratively to develop ethical principles for water data sharing.

Resources

- Access to computers and internet
- Relevant data sources (e.g., government water agencies, environmental organisations)
- Ethical frameworks and case study materials
- Presentation software

Cross curricular links

- Geography: Water resources, globalisation, sustainable development
- Science: Data analysis, environmental science
- Citizenship: Ethical decision-making, social responsibility
- ICT: Information technology, data management

Mapping with Morals (target 2.4)

This project aims to introduce young learners to the importance of protecting our oceans. Students will explore the idea of mapping the seabed and consider the potential impact on sea creatures and their homes.

For primary schools

Activities

- **Ocean exploration:** Discuss the ocean as a home for many creatures. Use pictures and videos to show the diversity of marine life.
- **Seabed mapping:** Explain that scientists map the seabed to learn about the ocean floor. Use simple analogies (e.g., mapping a garden) to illustrate the concept.
- **Impact on sea life:** Discuss how seabed mapping might disturb sea creatures (e.g., noise pollution, habitat destruction). Use role-play or storytelling to explore these impacts.
- **Caring for the ocean:** Encourage students to think about how we can protect sea life while still learning about the ocean. Discuss the importance of respecting marine environments.

Resources

- Pictures or videos of marine life and seabed

- Maps or globes
- Storybooks or picture books about ocean creatures
- Art materials for creating ocean scenes

Cross-curricular links

- Science: Living things and their habitats, animals including humans
- Geography: Maps, location, human-environment interaction
- Art and Design: Creative expression, imagination

For secondary schools

Activities

- **Understanding seabed mapping:** Introduce students to the technology and methods used in seabed mapping. Discuss the potential benefits of this technology (e.g., resource exploration, environmental monitoring).
- **Environmental impact:** Explore the potential impacts of seabed mapping on marine ecosystems (e.g., noise pollution, habitat disruption, species displacement).
- **Indigenous rights:** Discuss the rights of indigenous communities and their connection to the sea. Explore the potential impacts of seabed mapping on their cultural heritage and livelihoods.
- **Ethical frameworks:** Introduce ethical frameworks (e.g., utilitarianism, deontology) and apply them to seabed mapping.
- **Developing guidelines:** Work collaboratively to develop ethical guidelines for responsible seabed mapping practices. Consider factors such as environmental impact assessments, community consultation, and data sharing.

Resources

- Access to computers and internet
- Scientific papers or reports on seabed mapping
- Information about marine ecosystems and indigenous communities
- Ethical frameworks and case study materials

Cross-curricular links

- Geography: Marine environments, globalisation, sustainable development
- Science: Ecology, biodiversity, environmental science
- Citizenship: Ethical decision-making, social responsibility
- ICT: Information technology, data analysis

Genetic Transparency (target 2.5)

This project develops students' critical thinking and ethical reasoning skills through an exploration of the ethical implications of sharing marine DNA data. Students will analyse potential benefits and risks, considering issues such as conservation, privacy, and the responsible use of genetic information.

For primary schools

Activities

- **Ocean friends:** Discuss the diverse range of marine animals and their importance to the ocean ecosystem.
- **Animal secrets:** Explain that every animal has unique characteristics. Use examples of human characteristics (e.g., fingerprints, eye colour) to introduce the concept of DNA.
- **Sharing information:** Discuss the idea of sharing information about ourselves. Use simple examples (e.g., sharing toys, sharing secrets) to introduce the concept.
- **Protecting our friends:** Explore the potential consequences of sharing information about marine animals (e.g., people might harm them, their homes might be destroyed).
- **Making choices:** Encourage students to think about the importance of protecting marine animals and their privacy.

Resources

- Pictures or videos of marine animals
- Storybooks or picture books about animals
- Puppets or masks to represent different marine animals

Cross-curricular links

- Science: Living things and their habitats, animals including humans
- Personal, Social, Health Education (PSHE): Understanding feelings, respecting others
- Art and Design: Creative expression, imagination

For secondary schools

Activities

- **Marine genomics:** Introduce students to the concept of DNA and its role in marine research. Discuss the potential benefits of sharing marine DNA data (e.g., identifying endangered species, developing new medicines).
- **Privacy concerns:** Explore the potential privacy issues associated with sharing marine DNA data (e.g., identifying individuals, commercial exploitation).
- **Ethical frameworks:** Introduce ethical frameworks (e.g., utilitarianism, deontology) and apply them to marine DNA data sharing.
- **Case studies:** Analyse real-world case studies to illustrate the ethical dilemmas involved in marine genetic research.
- **Developing guidelines:** Work collaboratively to develop ethical guidelines for marine DNA data sharing. Consider factors such as data security, informed consent, and benefit sharing.

Resources

- Access to computers and internet
- Scientific papers or articles on marine genomics
- Ethical frameworks and case study materials
- Presentation software

Cross-curricular links

- Biology: Genetics, biodiversity, ecosystems
- Geography: Marine environments, globalisation, sustainable development
- Citizenship: Ethical decision-making, social responsibility

- ICT: Information technology, data management

Sustainable Fisheries Symposium (target 6.1)

This project aims to introduce young learners to the importance of caring for our oceans. Students will explore the concept of sustainable fishing and understand why some fishing practices harm marine life.

For primary schools

Activities

- **Ocean life:** Discuss the diversity of marine life and their importance to the ocean ecosystem.
- **Fishing fun:** Introduce different fishing methods (e.g., rod and reel, net fishing).
- **Friendly fishers:** Discuss the concept of sustainable fishing, focusing on catching fish without harming other sea creatures.
- **Ocean protectors:** Encourage students to create artwork or stories about being friendly fishers.
- **Community action:** Discuss ways to spread awareness about sustainable fishing, such as creating posters or writing letters to local fishmongers.

Resources

- Pictures or videos of marine life and different fishing methods
- Art materials
- Storybooks or picture books about ocean animals

Cross-curricular links

- Science: Living things and their habitats, animals including humans
- Art and Design: Creative expression, imagination
- Personal, Social, Health Education (PSHE): Understanding the world, caring for others

For secondary schools

Activities

- **Research:** Students research different fishing practices (e.g., bottom trawling, longline fishing) and their impact on marine ecosystems.
- **Ethical analysis:** Explore the ethical implications of destructive fishing practices, considering factors such as biodiversity loss, food security, and economic impact.
- **Symposium planning:** Students plan and organise a school symposium, inviting experts (e.g., marine biologists, fishermen, policymakers) to share their perspectives.
- **Public engagement:** Develop promotional materials (e.g., posters, social media campaigns) to engage the school community in the symposium.
- **Follow-up actions:** Identify potential actions the school can take to promote sustainable seafood consumption and raise awareness about ocean conservation.

Resources

- Access to computers and internet

- Public speaking and presentation skills training
- Guest speakers
- Venue for the symposium
- Promotional materials

Cross-curricular links

- Geography: Marine environments, globalisation, sustainable development
- Biology: Ecosystems, biodiversity
- Citizenship: Global issues, decision-making, communication
- Language: Research, writing, public speaking
- ICT: Digital media, communication

Economics Project

Climate Resilience Investment (target 2.3)

This project aims to introduce young learners to the economic value of water. Students will explore how oceans and weather patterns affect our lives and economy. They will learn about the importance of coastal protection, the costs of flooding, and the benefits of sustainable water use. Through practical activities and role-play, students will develop a basic understanding of economic concepts like cost, benefit, and investment.

For primary schools

Activities

- **Water footprint:** Calculate the water footprint of their school and home, discussing how water consumption impacts costs.
- **Coastal defences:** Design and cost low-cost coastal defences using recycled materials, understanding the importance of protection against storms.
- **Economic role-play:** Simulate a community facing a water shortage, making decisions about water allocation and pricing.
- **Field trip (optional):** Visit a local water treatment plant or coastal area to understand water management and challenges.

Resources

- Water usage data for the school
- Recycled materials for coastal defence models
- Basic economic concepts explained in child-friendly language
- Local weather and ocean data (simplified)

Cross-curricular links

- Geography: Water cycle, weather patterns, coastal landscapes
- Science: Water properties, ecosystems
- Maths: Data collection, calculations, graphing
- Citizenship: Community responsibility, environmental awareness

- Literature: Role play and character development.

For secondary schools

Activities

- **Cost-benefit analysis:** Evaluate the economic costs and benefits of different coastal adaptation strategies, such as sea walls, wetland restoration, or early warning systems.
- **Investment appraisal:** Explore potential investment opportunities in climate-resilient infrastructure and technologies.
- **Case study analysis:** Examine real-world examples of coastal communities that have successfully implemented coastal defences
- **Economic modelling:** Develop simple economic models to simulate the impact of different scenarios on coastal economies.

Resources

- Economic data on coastal communities
- Costing information for coastal adaptation measures

Links to the economics curriculum

- Microeconomics
- Macroeconomics
- Investment appraisal
- Cost-benefit analysis

Cross-curricular links

- Geography: Coastal geomorphology, climate change
- Maths: Data analysis, statistical methods, modelling
- Business Studies: Market analysis, entrepreneurship, risk assessment
- IT: Data handling, software applications

Rivers and Resources Analysis (Target 5.1.)

This project explores the role of rivers in our communities. Students will learn about the benefits of rivers, including providing water, energy, and recreation. They will also discover the impact of dams on rivers and the potential benefits of removing them. Through hands-on activities and role-play, students will develop an understanding of the economic and environmental importance of rivers.

For primary schools

Activities

- **River study:** Observe a local river or stream, noting its features and uses.
- **Benefits of rivers:** Create a poster or presentation highlighting the ways people use rivers.
- **Dam impact:** Discuss the purpose of dams and their effects on river ecosystems.
- **Role-play:** Simulate a community meeting to discuss the pros and cons of removing a dam.

- **Creative expression:** Write a story or poem about a river and its importance.

Resources

- Local river information and maps
- Pictures or videos of dams and rivers
- Art supplies for creating posters and visual aids

Cross-curricular links

- Geography: Rivers, water cycle, human impact on the environment
- Science: Habitats, ecosystems, water pollution
- Literacy: Reading, writing, speaking and listening
- Art and Design: Creative expression, visual communication

For secondary schools

Activities

- **Research:** Gather information on a specific dam and its surrounding area.
- **Economic analysis:** Calculate the economic value of the dam for electricity generation, flood control, and other purposes.
- **Cost-benefit analysis:** Estimate the potential costs and benefits of de-damming, including job creation, ecosystem restoration, and changes in land use.
- **Case study:** Analyse a real-world example of dam removal and its economic consequences.
- **Presentation:** Create a presentation outlining the findings of the project and making recommendations.

Resources needed

- Economic data on the region
- Information on dam construction and operation
- Environmental impact assessments
- Case studies of dam removal projects

Links to the economics curriculum

- Cost-benefit analysis
- Supply and demand
- Market failure

Cross-curricular links

- Geography: Rivers, ecosystems, human impact on the environment
- Mathematics: Data analysis, modelling
- Business Studies: Project management, presentation skills

Sustainable Market Economics Symposium (Target 7.1)

This project aims to introduce young learners to the concept of sustainability and its economic implications. Students will explore the impact of plastic on the environment and the importance

of reducing, reusing, and recycling. They will learn about the costs and benefits of using reusable or recyclable plastics, and the role of consumers in driving change.

For primary schools

Activities

- **Plastic audit:** Conduct a class survey on plastic usage and disposal habits.
- **Reuse challenge:** Create useful items from recycled plastic materials.
- **Cost comparison:** Compare the cost of single-use and reusable items.
- **Community action:** Organise a school-wide recycling drive or clean-up.
- **Presentation:** Share findings with the school community.

Resources

- Recycled plastic materials
- Information about plastic pollution and recycling
- Local recycling facilities

Cross-curricular links

- Science: Materials, recycling, environmental impact
- Maths: Data collection and analysis
- Art and Design: Creative reuse of materials
- Citizenship: Community involvement, environmental responsibility

For secondary schools

Activities

- **Market research:** Analyse the EU plastics market, including production, consumption, and waste management.
- **Consumer behaviour analysis:** Conduct surveys or interviews to understand consumer attitudes towards plastics.
- **Economic modelling:** Develop simple economic models to assess the impact of different policy scenarios.
- **Industry engagement:** Invite guest speakers from the plastics industry to share their perspectives.
- **Symposium organisation:** Plan and host a school symposium on the economics of plastics.

Resources

- Market research data on the plastics industry
- Economic data on the EU
- Access to experts in the field of sustainability and economics
- Presentation equipment

Links to the economics curriculum

- Market economics
- Supply and demand

- Cost-benefit analysis
- Environmental economics

Cross-curricular links

- Business Studies: Market research, entrepreneurship, sustainability
- Geography: Resource management, environmental impact
- Mathematics: Data analysis, modelling

Cost-Benefit Analysis of Advanced Wastewater Treatment (Target 8.3.)

This project introduces students to the importance of clean water for human health and the environment. They will explore the process of wastewater treatment and learn about the costs and benefits of improving water quality. Through hands-on activities and role-play, students will develop a basic understanding of economic concepts related to water management.

For primary schools

Activities

- **Water cycle:** Explore the water cycle and the importance of clean water.
- **Wastewater journey:** Create a model of a simple wastewater treatment plant.
- **Cost and benefits:** Discuss the costs of clean water (e.g., water bills) and the benefits (good health, clean environment).
- **Community action:** Brainstorm ways to conserve water and reduce pollution.
- **Presentation:** Share findings with the class and school community.

Resources

- Materials for creating a wastewater treatment model
- Information about water treatment processes
- Local water utility information

Cross-curricular Links

- Science: Water cycle, pollution, living things
- Geography: Water resources, human impact on the environment
- Maths: Data collection and simple calculations
- Art and Design: Creating models and visual aids

For secondary schools

Activities

- **Cost-benefit analysis:** Calculate the initial and ongoing costs of advanced wastewater treatment.
- **Economic modelling:** Develop a simple economic model to assess the impact of different treatment levels on public health and the environment.
- **Policy analysis:** Research existing government policies related to wastewater treatment and their effectiveness.
- **Presentation:** Develop a comprehensive presentation outlining the findings and recommendations.

Resources

- Economic data on wastewater treatment
- Environmental data on water quality and pollution
- Government policies and regulations
- Access to wastewater treatment facilities (optional)

Links to the economics curriculum

- Cost-benefit analysis
- Public finance
- Environmental economics

Cross-curricular links

- Geography: Water resources, pollution, urban planning
- Mathematics: Data analysis, modelling
- Science: Chemistry, biology, environmental science

Economic Viability of Ocean Energy Integration in the EU (Target 12.1.)

This project introduces young learners to the concept of renewable energy and the power of the ocean. Students will explore how waves and tides can be used to generate electricity. They will learn about the benefits of using clean energy and the importance of protecting our oceans. Through creative activities and role-play, students will develop a sense of responsibility for the environment.

For primary schools

Activities

- **Ocean exploration:** Learn about different creatures that live in the ocean.
- **Energy sources:** Discuss different types of energy (sun, wind, water).
- **Ocean power:** Explore how waves and tides can create energy.
- **Benefits of clean energy:** Discuss the positive impact of using clean energy.
- **Creative action:** Design an ocean energy device or a poster promoting clean energy.

Resources

- Pictures and information about oceans, waves, and tides
- Recycled materials for creating models or posters
- Information about renewable energy sources

Cross-curricular links

- Science: Energy, water, living things
- Geography: Oceans, coasts
- Art and Design: Creative expression, visual communication
- Citizenship: Environmental responsibility, global awareness

For secondary schools

Activities

- **Research:** Gather data on ocean energy resources, technology costs, and energy markets.
- **Economic analysis:** Calculate the costs and benefits of ocean energy projects.
- **Case studies:** Investigate successful ocean energy projects around the world.
- **Policy analysis:** Explore EU policies and incentives supporting ocean energy development.
- **Presentation:** Develop a comprehensive presentation outlining findings and recommendations.

Resources

- Economic data on energy markets and renewable energy
- Technical information on ocean energy technologies
- Environmental data on marine ecosystems
- Government policies and regulations

Links to the economics curriculum

- Cost-benefit analysis,
- Market failure,
- Environmental economics

Cross-curricular links

- Geography: Energy resources, coastal management, marine environment
- Mathematics: Data analysis, modelling
- Business Studies: Investment appraisal, risk assessment, sustainability

Sustainable Fisheries in Bilateral Trade Agreements (Target 17.6.)

Students investigate the economic implications of incorporating conditions related to the elimination of IUU (Illegal, Unreported, Unregulated) fishing and adherence to international fisheries agreements in EU bilateral trade agreements. They analyse the impact on market access, trade balances, and the sustainability of fisheries.

For secondary schools

Activities

- Research the global fishing industry, including the challenges faced by fishers and consumers
- Analyse EU trade agreements, focusing on clauses related to fisheries and sustainability
- Investigate the impact of IUU fishing on fish populations, coastal communities, and the global economy
- Develop a case study of a specific fishery (e.g., tuna, cod) to analyse its sustainability
- Create a presentation or report outlining findings and recommendations

Resources

- Access to economic and fisheries data
- Online databases of trade agreements
- Software for data analysis and presentation (e.g., spreadsheets, presentation software)
- Guest speakers from the fishing industry or environmental organisations

Links to the economics curriculum

- Globalisation
- Trade
- Market economics
- Sustainability

Cross-curricular links

- Geography: Global patterns, environmental challenges, economic development
- Mathematics: Data analysis, statistics
- Business Studies: Market research, policy analysis

Physical Education (PE)

Marine Fitness Expedition (target 2.5)

This project aims to introduce young students to the importance of marine conservation through engaging physical activities. By combining coastal clean-ups, water-based fitness exercises, and beach explorations, students will develop a strong connection to the ocean while improving their physical health.

For primary schools

Activities

- **Beach clean-ups:** Students will participate in regular beach clean-ups, learning about marine pollution and its impact on wildlife. Activities can include sorting recyclable materials, data collection on litter types, and creating awareness posters.
- **Water-based fitness:** Fun and engaging water-based activities such as splashing, jumping, and swimming will be introduced to improve students' water confidence and physical abilities. Games like water relay races and obstacle courses can be incorporated.
- **Beach exploration:** Students will explore the coastal environment, learning about different marine habitats and the creatures that live there. Activities include building sandcastles, collecting natural materials, and observing tide pools.
- **DNA and biodiversity:** Through simple experiments and storytelling, students will be introduced to the concept of DNA and its role in identifying different marine species. They will learn about the importance of biodiversity and how human activities impact marine ecosystems.

Resources

- Beach access and safety equipment (gloves, buckets, spades)

- Water-based fitness equipment (floats, balls)
- Magnifying glasses, identification charts, and books about marine life
- Simple DNA extraction kits (for older primary students)

Links to the physical education curriculum

- Water safety
- Physical activity
- Teamwork

Cross-curricular links

- Science: Habitats, living things, human impact on the environment
- Literacy: Writing reports, creating posters, storytelling
- Art and Design: Creating marine-themed artwork

For secondary schools

Activities

- **Coastal Clean-ups:** Students will organise and lead beach clean-ups, collecting data on litter types and quantities. They will analyse the data to identify pollution hotspots and develop strategies for reducing marine litter.
- **Water-based Fitness Challenges:** Students will participate in a variety of water-based fitness activities, such as surfing, kayaking, or stand-up paddleboarding. These activities will improve physical fitness and water safety skills.
- **Community Engagement:** Students will create awareness campaigns about marine conservation issues, targeting local communities and schools. They will develop educational materials, organise presentations, and participate in community events.

Resources

- Beach access, safety equipment, and data collection materials
- Water sports equipment and certified instructors
- Digital tools for data analysis and presentation

Cross-curricular Links

- Physical Education: Water sports, fitness, teamwork
- Biology: Ecology, biodiversity, genetics, marine biology
- Geography: Coastal processes, human impact on the environment
- Citizenship: Community engagement, environmental responsibility
- Mathematics: Data collection and analysis

River Conservation Fitness Challenge (target 17.4)

Students engage in physical activities focused on raising awareness about river conservation. This could include activities like community clean-ups, nature walks along riverbanks, or even water-based sports emphasising the importance of protecting rivers.

For primary schools

Activities

- **River walks:** Observe the river's environment, identify plants and animals, and discuss the importance of clean water.
- **Litter picking:** Participate in community clean-up activities along the riverbank.
- **Water-based activities (supervised):** Introduce water safety and enjoyment through activities like pond dipping or paddling.
- **Creative expression:** Create art or poetry inspired by the river and its surroundings.

Resources

- Waterproof clothing and footwear
- Litter picking equipment
- Pond dipping nets and containers
- Art materials

Cross-curricular links

- Science: Habitats, ecosystems, pollution
- Geography: Local geography, water cycle
- Art and Design: Creative expression, observation

For secondary schools

Activities

- **Water quality testing:** Collect water samples and analyse parameters such as pH, temperature, and dissolved oxygen.
- **River surveys:** Conduct surveys to assess the health of the river ecosystem, including biodiversity and habitat quality.
- **Community engagement:** Organise river clean-up events and educational workshops for the local community.
- **Data analysis and presentation:** Analyse collected data to identify potential problems and propose solutions.
- **Develop a river management plan:** Create a plan for improving river health based on findings.

Resources

- Water quality testing kits
- Scientific equipment (e.g., thermometers, pH metres)
- Litter picking equipment
- Safety equipment (e.g., life jackets for water-based activities)
- Access to local environmental agencies or experts

Cross-curricular links

- Geography: Water cycle, river systems, environmental management
- Science: Ecology, environmental science, data analysis
- PE: Physical activity, teamwork, outdoor education

- Citizenship: Community engagement, environmental responsibility

Language

Water Words Unite (target 2.2)

This project develops students' intercultural competence and research skills through an exploration of the linguistic diversity surrounding water observation. Students will create multilingual resources to promote understanding and collaboration in the context of global water data.

For primary schools

Activities

- **Water is everywhere:** Discuss the importance of water for people, animals, and plants.
- **Water words:** Introduce the English word for water. Encourage students to share if they know the word for water in other languages.
- **Language map:** Create a class map showing where different languages are spoken.
- **Water word collection:** Collect water-related words in different languages (e.g., rain, river, ocean).
- **Water word pictures:** Draw or paint pictures to represent the collected water words.

Resources

- A large world map
- Language dictionaries or online resources
- Art materials

Links to the language curriculum

- Vocabulary development
- Listening
- Speaking

Cross-curricular links

- Geography: Maps, different countries and cultures
- Art and Design: Creative expression, communication

For secondary schools

Activities

- **Language and culture:** Discuss the relationship between language and culture, focusing on how language reflects a society's relationship with water.
- **Water terminology:** Research water-related terms in different languages, including scientific and technical vocabulary.

- **Multilingual glossary:** Create a digital or print glossary of water-related terms in multiple languages.
- **Cultural comparisons:** Analyse the cultural nuances and connotations of water-related terms across different languages.
- **Educational materials:** Develop educational materials (e.g., posters, presentations, videos) to promote awareness of linguistic diversity in water science.

Resources

- Access to computers and the internet
- Language dictionaries and online resources
- Graphic design software or tools
- Presentation software

Links to the language curriculum

- Vocabulary development
- Research
- Presentation

Cross-curricular links

- Geography: Globalisation, cultural diversity, environmental issues
- Modern Foreign Languages: Language acquisition, cultural understanding
- ICT: Digital literacy, research skills

Voices of the Seabed (target 4.1)

Students will investigate the recovery of seabed habitats through the collection and analysis of oral histories. They will explore the ecological and cultural significance of seabed ecosystems.

For primary schools

Activities

- **Ocean floor exploration:** Learn about different creatures that live on the seabed.
- **Seabed stories:** Listen to stories about the seabed from adults who live near the coast.
- **Seabed care:** Understand how human activities can affect the seabed.
- **Sharing our stories:** Create stories or drawings about seabed life and protection.

Resources

- Pictures and information about seabed creatures.
- Art materials (paper, crayons, markers).
- Audio recording equipment (optional).

Cross-curricular links

- Science: Living things, habitats, change.
- Geography: Oceans, environment.
- Art and Design: Creative expression, communication.

- Citizenship: Global citizenship, environmental awareness.

For secondary schools

Activities

- **Seabed habitat research:** Study different types of seabed habitats and their ecological importance.
- **Oral history methodology:** Develop interview questions and conduct interviews with local communities and experts.
- **Data analysis:** Transcribe and analyse interview recordings to identify key themes and trends.
- **Cultural and ecological interpretation:** Explore the cultural and ecological significance of seabed habitats.
- **Communication of findings:** Create multimedia presentations, reports, or exhibitions to share findings.

Resources

- Audio recording equipment.
- Transcription software.
- Language translation tools (if necessary).
- Presentation software.

Links to the language curriculum

- Language analysis
- Communication

Cross-curricular links

- Geography: Cultural geography, environmental management.
- History: Oral history, cultural heritage.
- Citizenship: Global citizenship, community engagement.

Plastic-Free Advocacy Campaign (target 7.2)

Students will develop a multilingual advocacy campaign to raise awareness about the issue of single-use plastics. They will conduct research, create informative materials, and organise events to engage the school community.

For primary schools

Activities

- **Plastic hunt:** Explore the school and local area to find plastic items.
- **Plastic problems:** Discuss the impact of plastic on the environment.
- **Plastic alternatives:** Explore reusable alternatives to plastic items.
- **Creative expression:** Design posters, songs, or plays about reducing plastic use.
- **Sharing knowledge:** Present their work to the school community.

Resources

- Recycled materials for creating posters and props.
- Art supplies.

Cross-curricular links

- Science: Materials, recycling.
- Art and Design: Creative expression, communication.
- Citizenship: Environmental awareness, responsible consumption.

For secondary schools

Activities

- **Plastic pollution research:** Investigate the sources, impacts, and solutions to plastic pollution.
- **Target audience analysis:** Identify key audiences for the campaign (e.g., students, staff, parents).
- **Campaign development:** Create multilingual campaign materials (posters, leaflets, social media content).
- **Event planning:** Organise events such as plastic-free days, workshops, or competitions.
- **Evaluation:** Assess the impact of the campaign through surveys and feedback.

Resources

- Access to research materials and statistics on plastic pollution.
- Design software for creating visual materials.
- Language resources (dictionaries, translation tools).
- Event planning materials.

Links to the language curriculum

- Language analysis
- Communication
- Persuasive writing

Cross-curricular links

- Science: Environmental science, chemistry.
- Citizenship: Global citizenship, environmental awareness.
- Business Studies: Marketing, public relations.

Maritime Waste Management Communication Campaign (target 8.4)

Pupils will become ocean protectors, learning about how to keep our seas clean. They will understand the importance of treating ship waste properly and create messages to encourage others to help.

For primary schools

Activities

- **Ocean exploration:** Learn about different sea creatures and their habitats.

- **Ship pollution:** Discuss how ships can pollute the ocean with dirty water.
- **Clean seas:** Understand the importance of treating ship waste on land.
- **Sharing knowledge:** Create pictures, songs, or plays about clean seas.

Resources

- Pictures and information about marine life and ships.
- Art materials (paper, crayons, markers).

Cross-curricular links

- Science: Living things, habitats, pollution.
- Geography: Oceans, transport.
- Art and Design: Creative expression, communication.
- Citizenship: Environmental awareness, global citizenship.

For secondary schools

Activities

- **Policy research:** Investigate the policy and its implications for marine environments.
- **Target audience analysis:** Identify key audiences for the campaign (e.g., students, staff, local community).
- **Campaign development:** Create multilingual campaign materials (posters, leaflets, social media content).
- **Event planning:** Organise events such as information sessions, debates, or exhibitions.
- **Evaluation:** Assess the campaign's effectiveness through surveys and feedback.

Resources

- Information on ship waste and wastewater treatment.
- Language resources (dictionaries, translation tools).
- Design software for creating visual materials.
- Event planning materials.

Links to the language curriculum

- Language analysis
- Communication
- Persuasive writing

Cross-curricular links

- Science: Chemistry, biology, environmental science.
- Geography: Oceans, pollution, transport.
- Citizenship: Global citizenship, environmental awareness.
- Business Studies: Marketing, public relations.

Communicating Sustainability in Ship Recycling (target 11.3)

Students will become storytellers, creating multilingual narratives about the history of energy transitions in the European Union. Through research and creative activities, they will learn about the importance of renewable energy, especially ocean energy.

For primary schools

Activities

- **Energy research:** Students will research different types of energy, including renewable and non-renewable sources.
- **Ocean energy exploration:** Students will learn about different forms of ocean energy, such as wave power, tidal power, and ocean thermal energy conversion.
- **Storytelling:** Students will create stories about the history of energy transitions in Europe, focusing on the role of ocean energy. They can use different formats, such as written stories, audio recordings, or puppet shows.
- **Multilingual presentation:** Students will present their stories in a variety of European languages. They can use online tools or language apps to practise speaking different languages.

Resources

- Books and articles about energy and renewable energy
- Information about ocean energy technologies
- Language learning resources (e.g., online courses, language apps)
- Recording equipment (e.g., microphones, cameras)

Links to the language curriculum

- Writing
- Speaking
- Listening
- Reading

Cross-curricular links

- Science: Understanding energy, renewable resources, and the environment
- Geography: Exploring Europe and its history
- History: Learning about historical events and trends

For secondary schools

Activities

- **Historical research:** Students will research the history of energy production and consumption in Europe, including the development of fossil fuels and the emergence of renewable energy sources.
- **Ocean energy analysis:** Students will analyse the potential of ocean energy resources in Europe, considering factors such as technical feasibility, economic viability, and environmental impact.

- **Storytelling:** Students will create multilingual narratives about energy transitions, incorporating historical events, key figures, and technological advancements. They can use different formats, such as written stories, audio recordings, or multimedia presentations.
- **Language learning:** Students will learn or improve their skills in one or more European languages to present their narratives effectively.

Resources

- Historical documents and archives
- Scientific journals and articles on energy and ocean energy
- Language learning resources (e.g., online courses, language apps)
- Recording equipment (e.g., microphones, cameras)
- Presentation software (e.g., PowerPoint, Prezi)

Links to the language curriculum

- Writing
- Speaking
- Listening
- Reading

Cross-curricular links

- History: Historical research, analysis, and interpretation
- Geography: European geography, environmental studies
- Science: Energy, renewable energy, environmental science

Energy Transitions in Multilingual Narratives (target 12.1)

Students will become storytellers, creating multilingual narratives about the history of energy transitions in the European Union. Through research and creative activities, they will learn about the importance of renewable energy, especially ocean energy.

For primary schools

Activities

- **Energy research:** Students will research different types of energy, including renewable and non-renewable sources.
- **Ocean energy exploration:** Students will learn about different forms of ocean energy, such as wave power, tidal power, and ocean thermal energy conversion.
- **Storytelling:** Students will create stories about the history of energy transitions in Europe, focusing on the role of ocean energy. They can use different formats, such as written stories, audio recordings, or puppet shows.
- **Multilingual presentation:** Students will present their stories in a variety of European languages. They can use online tools or language apps to practise speaking different languages.

Resources

- Books and articles about energy and renewable energy

- Information about ocean energy technologies
- Language learning resources (e.g., online courses, language apps)
- Recording equipment (e.g., microphones, cameras)

Links to the language curriculum

- Writing
- Speaking
- Listening
- Reading

Cross-curricular links

- Science: Understanding energy, renewable resources, and the environment
- Geography: Exploring Europe and its history
- History: Learning about historical events and trends

For secondary schools

Activities

- **Historical research:** Students will research the history of energy production and consumption in Europe, including the development of fossil fuels and the emergence of renewable energy sources.
- **Ocean energy analysis:** Students will analyse the potential of ocean energy resources in Europe, considering factors such as technical feasibility, economic viability, and environmental impact.
- **Storytelling:** Students will create multilingual narratives about energy transitions, incorporating historical events, key figures, and technological advancements. They can use different formats, such as written stories, audio recordings, or multimedia presentations.
- **Language learning:** Students will learn or improve their skills in one or more European languages to present their narratives effectively.

Resources

- Historical documents and archives
- Scientific journals and articles on energy and ocean energy
- Language learning resources (e.g., online courses, language apps)
- Recording equipment (e.g., microphones, cameras)
- Presentation software (e.g., PowerPoint, Prezi)

Links to the language curriculum

- Writing
- Speaking
- Listening
- Reading

Cross-curricular links

- History: Historical research, analysis, and interpretation

- Geography: European geography, environmental studies
- Science: Energy, renewable energy, environmental science

Multilingual Communication for Water Conservation (target 16.1)

Students will become ocean champions, creating multilingual materials to raise awareness about the important work of the European Ocean and Water Agency (EOA). Through research and creative activities, they will learn about the challenges facing our oceans and waterways and the steps we can take to protect them.

For primary schools

Activities

- **Research:** Students will learn about the European Ocean and Water Agency and its initiatives to protect our oceans and waterways.
- **Creative content:** Students will create engaging and informative content, such as posters, videos, or comics, about EOA's work.
- **Multilingual presentation:** Students will present their content in different languages to reach a wider audience.
- **Community outreach:** Students can share their materials with their classmates, community members, and local organisations.

Resources

- Information about the European Ocean and Water Agency and its initiatives
- Language learning resources (e.g., online courses, language apps)
- Creative materials (e.g., markers, paper, cameras)
- Presentation software (e.g., PowerPoint)

Links to the language curriculum

- Writing
- Speaking
- Presenting information

Cross-curricular links

- Science: Understanding marine ecosystems, water pollution, and conservation
- Geography: Exploring oceans, waterways, and human-environment interactions
- Art: Creating and designing educational materials

For secondary schools

Activities

- **Research:** Students will conduct in-depth research on the European Ocean and Water Agency's work, including its goals, projects, and achievements.
- **Target audience analysis:** Students will identify the target audience for their communication materials, considering factors such as age, language, and interests.
- **Content creation:** Students will develop engaging and informative content, such as social media posts, articles, or videos, that are tailored to their target audience.

- **Multilingual translation:** Students will translate their content into multiple European languages to reach a wider audience.
- **Distribution:** Students will distribute their materials through social media, online platforms, and local organisations.

Resources

- Information about the European Ocean and Water Agency and its initiatives
- Language learning resources (e.g., online courses, language apps)
- Design software (e.g., Canva, Adobe InDesign)
- Social media platforms
- Online publishing platforms

Links to the language curriculum

- Writing
- Speaking
- Presenting information

Cross-curricular links

- Science: Environmental science, marine biology, water resources
- Geography: European geography, human-environment interactions
- Media Studies: Digital media, communication, public relations

Drama

The Silent Seas: A Theatrical Exploration (target 10.2)

Students collaborate on writing a theatrical script that explores the challenges of noise pollution in marine environments and the effectiveness of mitigation measures. Students can then perform the play for the school community, incorporating elements of drama, storytelling, and environmental advocacy.

For primary schools

Activities

- Research different marine animals and their habitats
- Learn about the sources of noise pollution in the ocean (e.g., ships, sonar, drilling)
- Discuss the impact of noise pollution on marine life (e.g., communication, navigation)
- Write a script for a short play, including characters and dialogue
- Rehearse and perform the play for the class

Resources

- Books and online resources about marine life and noise pollution

- Props and costumes for the play
- Performance space

Cross-curricular links

- Science: Habitats, ecosystems, human impact on the environment
- English: Literacy, communication
- Art and Design: Costume design, set design

For secondary schools

Activities

- Research the sources and impacts of noise pollution on marine ecosystems
- Develop characters representing different stakeholders (e.g., scientists, fishermen, policymakers)
- Write a script incorporating dramatic elements (e.g., conflict, tension, resolution)
- Design sets, costumes, and lighting for the performance
- Explore the use of multimedia (e.g., sound effects, projections) to enhance the performance
- Evaluate the effectiveness of the performance in raising awareness

Resources

- Access to scientific research on noise pollution
- Drama textbooks and resources
- Theatre equipment (lights, sound, costumes)
- Performance space

Links to the drama curriculum

- Scriptwriting
- Performance
- Audience engagement

Cross-curricular links

- Science: Ecology, environmental science, acoustics
- English: Language, communication, research
- Geography: Global patterns, human impact on the environment

Theatrical Performance on Protecting Seabed Habitats (target 17.3)

Students collaborate to write a theatrical script that dramatizes the importance of protecting seabed habitats and the journey to achieving a global ban. They then perform the play, incorporating elements of storytelling, emotion, and advocacy for environmental conservation

For primary schools

Activities

- Research different seabed animals and their habitats

- Discuss threats to seabed life (e.g., pollution, overfishing, climate change)
- Develop characters and storylines for the play
- Create costumes and props for the performance
- Rehearse and perform the play for the class and parents

Resources

- Books or online resources about marine life and seabed habitats
- Art materials for costume and prop making
- Performance space

Cross-curricular links

- Science: Habitats, ecosystems, environmental impact
- English: Literacy, communication
- Art and Design: Creativity, costume design

For secondary schools

Activities

- Research the importance of seabed habitats for marine biodiversity
- Explore the impacts of human activities on seabed ecosystems (e.g., deep-sea mining, fishing)
- Develop characters representing different stakeholders (e.g., scientists, fishermen, policymakers)
- Write a script with a strong narrative and clear message
- Design sets, costumes, and lighting for the performance
- Explore the use of multimedia (e.g., projections, sound effects) to enhance the performance

Resources

- Access to scientific research on seabed ecosystems
- Drama textbooks and resources
- Theatre equipment (lights, sound, costumes)
- Performance space

Links to the drama curriculum

- Scriptwriting
- Performance
- Audience engagement

Cross-curricular links

- Science: Ecology, marine biology, environmental science
- English: Language, communication, research
- Geography: Global patterns, environmental challenges

Information Technology (IT)

Building a Digital Platform for Blue Biotech Knowledge Sharing (target 14.1)

Students work on designing and developing a digital platform that facilitates knowledge sharing in the field of blue biotechnology. The platform could include databases, forums, and interactive features to connect researchers, professionals, and enthusiasts.

For primary schools

Activities

- Research different marine animals and their special characteristics
- Learn about the concept of biotechnology and how it can help marine life
- Create informative posters or presentations about their chosen marine creature
- Develop simple ways to share information with classmates (e.g., using a class wiki or digital storytelling)

Resources

- Access to the internet for research
- Art materials for creating posters
- Digital devices for creating presentations or online resources
- Educational resources on marine life and biotechnology

Links to the IT curriculum

- Digital literacy
- Communication
- Collaboration

Cross-curricular links

- Science: Animals, habitats, human impact on the environment
- English: Literacy, communication, presentation skills

For secondary schools

Activities

- Research the latest advancements in blue biotechnology
- Design the structure and features of the knowledge sharing platform
- Develop content for the platform, including articles, videos, and presentations
- Create interactive elements such as forums, blogs, or wikis
- Evaluate the platform's effectiveness in promoting knowledge exchange

Resources

- Access to the internet for research and collaboration
- Digital platform development tools (e.g., WordPress, Wix, or coding languages)
- Design software for creating visual content
- Mentorship from IT professionals or scientists

Links to the IT curriculum

- Digital literacy
- Programming
- Database management

Cross-curricular links

- Science: Biology, chemistry, environmental science
- Mathematics: Data analysis, statistics

Digital Showcase of Blue Biotech Innovations (target 14.2)

Students create a digital showcase to present the scientific innovations in blue biotechnology. This can include interactive presentations, animations, and multimedia elements to effectively communicate complex scientific concepts to a broad audience.

For primary schools

Activities

- Research different marine creatures and their unique abilities
- Learn about the concept of biotechnology and how it can be used to help marine life
- Create imaginative characters based on marine organisms with special superpowers
- Develop short animations or stories featuring these characters showcasing their biotechnological abilities
- Present the final project to the class and explain the science behind the characters

Resources

- Access to the internet for research
- Art materials for character design
- Animation software (e.g., Scratch, Stop Motion Studio)
- Educational resources on marine life and biotechnology

Links to the IT curriculum

- Digital literacy
- Creativity
- Communication

Cross-curricular links

- Science: Animals, habitats, human impact on the environment
- English: Storytelling, imagination

For secondary schools

Activities

- Research current advancements in blue biotechnology (e.g., biofuels, bioremediation, pharmaceuticals)
- Select a specific blue biotechnology innovation to focus on
- Develop a communication strategy to explain the science behind the innovation
- Create interactive elements (e.g., simulations, infographics) to engage the audience
- Design a digital platform or presentation to showcase the innovation
- Evaluate the effectiveness of the showcase in communicating complex ideas

Resources

- Access to scientific journals and databases
- Digital design software (e.g., Adobe Creative Suite, Canva)
- Video editing software
- Mentorship from scientists or industry experts

Links to the IT curriculum

- Digital literacy
- Programming
- Data analysis

Cross-curricular links

- Science: Biology, chemistry, environmental science
- Design and Technology: Product design, communication
- Mathematics: Data analysis, modelling

Digital Monitoring System for Carbon Footprint in Marinas (target 15.1)

Students work on developing a digital monitoring system that tracks and displays the carbon footprint of marinas. This IT solution can provide real-time data on energy usage, emissions, and the effectiveness of sustainability measures.

For primary schools

Activities

- Research different types of marine pollution (e.g., oil spills, litter, noise pollution)
- Design a model marina that incorporates eco-friendly features (e.g., recycling bins, solar panels)
- Create posters or presentations to raise awareness about harbour pollution
- Participate in a local beach clean-up

Resources

- Art materials for creating the model marina
- Recycling materials for building the model
- Information about marine pollution and environmental protection

- Access to local beach or harbour

Cross-curricular links

- Science: Habitats, pollution, environmental impact
- Art and Design: Creativity, problem-solving
- Geography: Local geography, human impact on the environment

For secondary schools

Activities

- Research the environmental impact of marinas and the importance of carbon reduction
- Identify key data points to be collected (e.g., energy consumption, waste generation, water usage)
- Design a data collection system (e.g., sensors, surveys)
- Develop a digital platform for data analysis and visualisation
- Propose strategies to reduce the marina's carbon footprint

Resources

- Access to data collection devices (e.g., sensors, metres)
- Computer software for data analysis and visualisation (e.g., Excel, Python)
- Access to environmental data and regulations
- Mentorship from experts in environmental science or engineering

Links to the IT curriculum

- Programming
- Data management
- Digital literacy

Cross-curricular links

- Science: Data analysis, environmental science, energy
- Mathematics: Data analysis, statistics
- Geography: Environmental systems, human impact on the environment
- Business Studies: Sustainability, environmental management

Digital Platform for Ocean and Water Data Integration (target 16.1)

Students design and develop a digital platform that integrates data related to European oceans and waters. This IT project aims to streamline data collection, analysis, and accessibility for the European Ocean and Water Agency.

For primary schools

Activities

- Learn about different types of water bodies (rivers, lakes, oceans)
- Identify key indicators of water quality (e.g., clarity, smell, presence of litter)
- Create a simple data collection sheet or digital form

- Record observations during school outings or local walks
- Share findings with the class and discuss the importance of data sharing

Resources

- Notebooks, pencils, or tablets for data collection
- Cameras or phones to take pictures
- Access to simple data analysis tools (e.g., online spreadsheets)

Links to the IT curriculum

- Basic data handling
- Communication

Cross-curricular links

- Science: Habitats, ecosystems, data collection
- Geography: Maps, location, environmental issues

For secondary schools

Activities

- Research European water bodies and the challenges they face
- Identify key data points to be collected (e.g., water quality, temperature, salinity, biodiversity)
- Design a database structure to store and manage data
- Develop a user-friendly interface for data input and visualisation
- Collaborate with local environmental agencies or research institutions
- Present the platform to a wider audience (e.g., through a school exhibition)

Resources

- Access to data sources (e.g., government agencies, research institutions)
- Database software (e.g., MySQL, PostgreSQL)
- Programming languages (e.g., Python, JavaScript)
- Data visualisation tools (e.g., Tableau, Power BI)
- Mentorship from IT professionals or environmental scientists

Links to the IT curriculum

- Programming
- Database management
- Data visualisation

Cross-curricular links

- Geography: Geographic Information Systems (GIS), global patterns, environmental challenges
- Science: Data analysis, environmental science, technology
- Mathematics: Data analysis, statistics

Digital Platform for Global River Conservation (target 17.4)

Students work on developing a digital platform that serves as a hub for global river conservation efforts. The platform could include features such as interactive maps, data visualisation tools, and collaboration spaces for international organisations, researchers, and communities.

For primary schools

Activities

- Research different river environments and the creatures that live there
- Identify local water bodies and their importance to the community
- Create characters representing different river animals or elements (e.g., water droplets, fish)
- Use digital tools to create a storybook with illustrations and narration
- Share the storybook with classmates and the local community

Resources

- Access to computers and digital storytelling software
- Art materials for creating illustrations
- Books and online resources about rivers and water ecosystems
- Digital cameras or tablets for taking photos

Links to the IT curriculum

- Digital literacy
- Media creation

Cross-curricular links

- Science: Habitats, ecosystems, environmental impact
- English: Storytelling, creativity, communication

For secondary schools

Activities

- Research global river challenges (e.g., pollution, damming, climate change)
- Design the structure and features of the digital platform
- Collect and analyse river-related data (e.g., water quality, biodiversity)
- Develop interactive maps and data visualisations to communicate findings
- Create online forums or chat rooms for collaboration and knowledge sharing
- Evaluate the platform's effectiveness and potential for scaling up

Resources

- Access to geographic information systems (GIS) software
- Data on rivers and water quality
- Programming skills (e.g., Python, JavaScript)
- Web development tools (e.g., HTML, CSS)

- Mentorship from IT professionals or environmental scientists

Links to the IT curriculum

- Programming
- Database management
- Digital literacy

Cross-curricular links

- Geography: Global patterns, environmental challenges, geographical data
- Science: Data analysis, environmental science, technology
- Mathematics: Data analysis, statistics
- Citizenship: Global citizenship, environmental responsibility