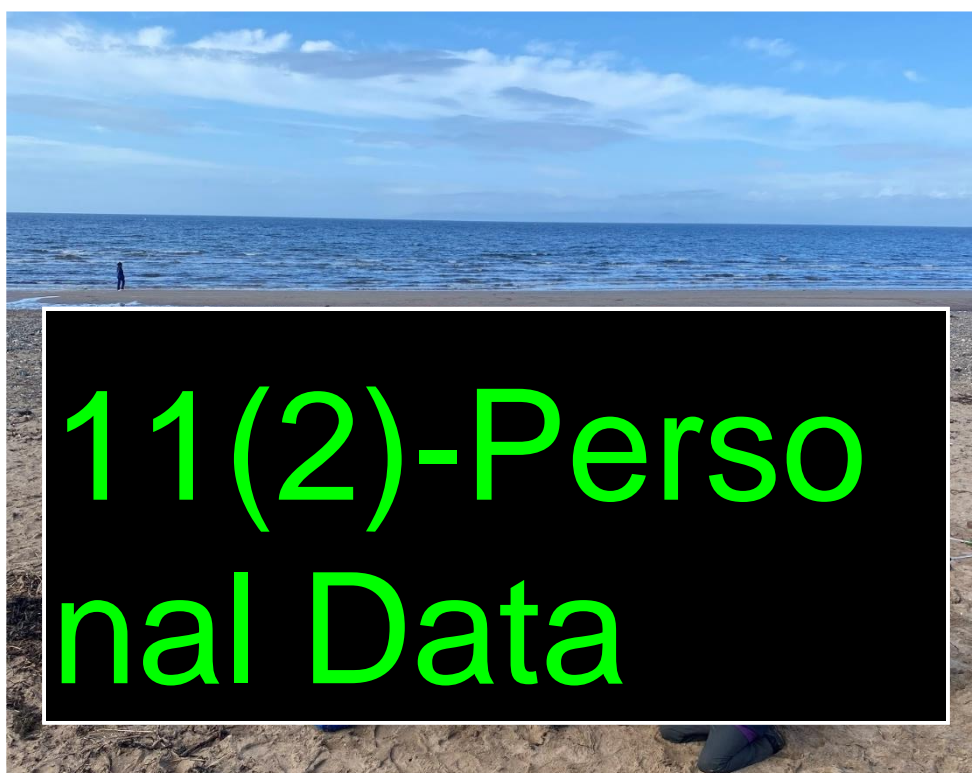


Protecting Scotland's Seas: Marine Education Roadshow 2023

90% of Scotland's population now live in urban areas and the number of children playing outdoors has halved in a generation. This, along with the ongoing climate crisis, highlights the need for more ocean and climate literacy in classrooms, and access to coastal environments.



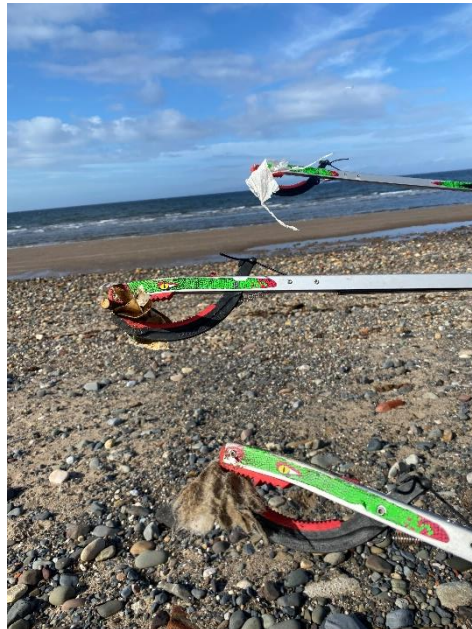
Pupils from Kingcase Primary School at Prestwick Beach

Due to the incredible success of our Scottish Education Roadshow, which initially took place between October 2021 and September 2022, and the increase in demand for school visits across Scotland, we were pleased to receive an extension of funding from Crown Estate Scotland to help us reach even more young people.

The Protecting Scotland's Seas Roadshow is a marine-themed education experience featuring a selection of options tailored for schools and youth groups to engage with the marine and outdoor environment. Sessions cover topics such as biodiversity, Scottish marine species, blue carbon, ocean acidification, and the health and wellbeing impact of being near the ocean.

The project has a special focus on marine litter in Scotland and encourages schools and young people to support our Beachwatch citizen science project - surveying litter on local beaches. Our recent 2022 Beachwatch report found **160 items** on average per 100m of beach surveyed. With plastic and polystyrene cups recorded on **58%** of beaches, we included the concept of policy and advocacy in our lesson plans and introduced pupils to the idea of a Circular Economy.

From 1st February – 31st March 2023 we had a busy time - thanks to Crown Estate Scotland's support. We visited eight Scottish Local Council Authority areas to deliver 13 different events, connecting with nearly 600 young people from nursery school pupils to university students



Litter collected by Kingcase Primary and Beachwatch survey in progress

Highlights of our work in Scotland

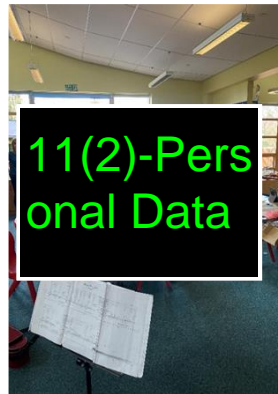
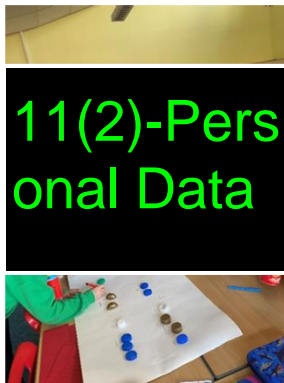
- A workshop for International Women's Day with 51 female secondary school pupils in East Renfrewshire. This was a showcase for marine career pathways and a support network for routes to a first career in environmental and marine science for females in STEM (Science, Technology, Engineering and Maths).
- We facilitated the Sea Scotland Youth Conference at Montrose Basin, providing young people aged 18-25 years the chance to connect, network and feel more confident and comfortable in the marine policy space. With a day of workshops, networking stations and sessions to help develop marine education, many of the young people who attended will now head to the main conference on World Ocean Day, some for the first time, feeling more equipped and able to contribute. This event was key in taking first steps to embed vitally important youth voices at this crucial marine policy conference space.
- Speaking to over 250 pupils invited from schools across Fife, Edinburgh and the Lothians at the Dynamic Earth STEM Marine Careers event. Hands on activities highlighted beach litter, plastic pollution and solutions, plus Scottish marine biodiversity.

- Taking part in the 'Meet the Expert' showcase event for British Science Week at Glasgow Science Centre, where we were quizzed by primary school pupils about the ocean.
- Using our Beachwatch litter survey to clean up a stretch of beach in Prestwick, South Ayrshire with Kingcase Primary School and compare our results from last year. This class, now in Primary 7 have only a few months left at primary school. They want to use the findings and their experiences to raise awareness about litter and plastic pollution in their own school. Interestingly, we saw a 47% decrease in overall litter, but the amount of food packaging and sewage-debris remained the same.



Pupil taking part in the Marine Conservation stall at Dynamic Earth

- A workshop series for schools in Perthshire on marine litter and biodiversity, working in partnership with musicians and Scottish Symphony Orchestra members to create an arts and science-linked series of events. One hour of our workshop saw us getting creative with musical instruments and composition. We focused on exploring the importance of marine mammals, methods of communication, and importantly the journey of the humpback whale. We then used recycled materials to create amazing whale instruments and compose whale song. Using real-life examples of whale spectrograms, pupils mimicked the amazing communication song of humpback whales and performed a short concert for us.



Pupils in Perthshire midway through the marine music workshops

- To focus on our Source to Sea Litter Quest we hosted inland litter picks to highlight our message of *'the sea starts here'* and allow pupils from outside coastal areas to contribute to our citizen science survey work. At Oxgangs Primary School we identified local pathways where litter is bound for the sea, and used our litter timeline resource to talk about products made from plastic and how long these can last in the ocean.



Participants from the Sea Scotland Youth Event at Montrose Basin



Female pupils in the science lab at Eastwood High School on International Women's Day



Staff and volunteers from Marine Conservation Society hosting 'Meet the Expert' at Glasgow Science Centre

Total events delivered

Event	Area	Age Range	Total participants
Nursery School Indoor Workshop	Highland	3-5	15
SRUC Edinburgh Student Careers Event	Edinburgh	18 - 25	55
School Workshop and Source to Sea Litter Quest	Edinburgh	9-10	60
Sea Scotland Youth Conference	Angus	18 - 25	21
International Women's Day – Secondary Science Event	East Renfrewshire	12-13	18
Dynamic Earth STEM Careers event	Edinburgh	11-18	155
St Joseph's Primary – STEM Week Workshop	Fife	10-11	64
Glasgow Science Centre Schools British Science Week	Glasgow	11-18	70
River Earn Music Marine Workshops – Indoors x2 sessions	Perth and Kinross	8-10	57
River Earn Music Marine Workshops – Online x2 sessions	Perth and Kinross	8-10	50
School Beach Clean and Litter Survey	South Ayrshire	10-11	29
	8 areas		594

Future Learning and Outcomes

Repeat Learning

The use of repeat sessions to consolidate learning is a positive outcome. After working with the same group in 2022, children from Kingcase Primary School have started to develop their own ideas and learning around marine litter and their part to play as a school situated on the coast.

"We made a display for the school using all the single-use plastics from our snacks and lunches the day we were at the beach with you. This gave us the opportunity to discuss refusing single-use plastics and looking for alternatives to help avoid the need to re-use or recycle. Even though we understand the impacts of single-use plastic, every lunch contained plastics, this got us thinking about the problem on a larger scale to do with product manufacturing." 11(2)-Personal Data, Kingcase Primary School



Plastic artwork by Kingcase Primary School

Career Support

Marine science and STEM career sessions help to build a link between the education material and real-world application. The session for International Women's Day and the model of including career topics and marine science worked well.

"I think the session went really well. Some of the girls went to their usual class teacher afterwards and thanked them for putting their names forward, as they enjoyed it so much". Principal teacher, Eastwood High School

"The presentations were excellent and informative. Your career paths were so interesting, honest and showed the true nature of getting a job that you love with all the ups and downs involved. I think the pupils would have gained hugely from the experience, please keep the ideas coming on how we can build a successful partnership to enhance pupil learning here". Class teacher, Eastwood High School

Partnerships

Partnership working helped to strengthen our offer. A highlight was working with Sequoia Duo <https://www.sequoiaduo.com/> to create the marine music workshops focussing on the source to sea journey and the story of the humpback whale. Feedback from this connection of arts and science was very positive.

"The amazing music grabbed the pupil's attention, and the session was really well-paced, and pitched at the right level. We enjoyed the presentation, and it was great that you had personalised our local area. It would be a nice follow-on project for us to create artwork from the litter we find after completing your Source to Sea Litter Quest activity". Class teacher, Comrie Primary School

Promotion and publicity

A press release was circulated to Scottish press on 25th April 2023 and featured on Facebook and Instagram https://www.instagram.com/p/Crc5_pEOg-q/

The following blog was published on the Marine Conservation Society website, <https://www.mcsuk.org/news/the-ongoing-success-of-scotlands-marine-education-roadshow/>

Conclusion

The Protecting Scottish Seas Roadshow has truly extended its reach and impact thanks to funding from Crown Estate Scotland. Your generous support has enabled us to reach almost 600 additional children and young people across Scotland. Through event participation and fun filled activities we have been able to demonstrate the harmful impact of marine litter on coastal areas and wildlife, whilst highlighting the importance of action on marine waste. With your support we have helped to make a difference to the ocean literacy and health and wellbeing of the young people we worked with whilst showing them ways to becoming citizen scientists of the future and, for some, the possibility of a marine-focused career.