



MORECAMBE BAY CURRICULUM

Resources for our Bay: Our Future Coast



Foreword

The Morecambe Bay Curriculum (MBC) Partnership Board is delighted to support this educator-led movement as they continue to embed place, environment and sustainability into everyday learning. We are so proud of the ways our community continues to connect with learners using the head, heart and hands pedagogy. Thank you to all the educators and academics who have worked tirelessly on these materials. We hope that they inspire more colleagues to join the MBC movement so that we can collectively continue to make a difference to the Bay and the planet.



As Chair of the MBC Partnership Board, teachers have told me repeatedly how important it is to have relevant, relatable, and reliable environmental resources when discussing climate, nature and sustainability. This is why we are pleased to partner with Our Future Coast on our latest tranche of educational resources. Lancaster University's founding motto is 'Truth lies open to all', and the collaboration between teachers and academics that has created these resources is a great example of this in practice. We are an accessible university, through a strong commitment to widening access – we work hard to be "open to all". We strive to be pioneering, creative and innovative in how we work, to discover "truth" in our research and share that "truth". Lancaster University is dedicated to its civic commitments and to working with partners and communities to make a positive difference in our region. It is brilliant to see colleagues from our Environment Centre as well as the School of Arts, School of Global Affairs and School of Social Sciences coming together to support this project, working closely with the fantastic teachers they have been paired with.

I was proud to see the MBC receive a QS award, which cited the project as a leading example globally of 'Sustainability Action'. This is a testament to the energy all partners, educators, community members and colleagues have put into bringing the MBC into being. This is a very special and unique project. We hope you will continue with us on this journey!

Prof Sarah Kemp

Pro-Vice Chancellor, Engagement, Lancaster University

Our Future Coast has been successfully delivering the co-design of nature-based solutions along the North West Coast for nearly five years. Throughout this time, we have engaged a wide range of stakeholders in complex and often challenging discussions around coastal change, climate change, and the need to adapt how we plan and manage our coastlines. A central aim of the programme has always been to explore new approaches – to do things differently.

This ambition is what drew us to Morecambe Bay Curriculum. Its focus on teacher-academic partnerships, with co-design at its core, strongly aligns with the principles we have been working to embed. The direct connection with local schools has provided a valuable opportunity not only to support a project with closely shared values, but also to actively engage, influence, and inspire the next generation.

We particularly value the inclusion of Our Future Coast sites and projects as locally relevant case studies. We hope this collaboration will create a lasting legacy within the region.

Today's young people will become the coastal managers of the future. By supporting this project, we aim to inspire and sustain their interest in the coastlines where they grew up—strengthening their connection to these environments and encouraging them to stay, contribute, and develop as the next generation of coastal practitioners.

Ellie Brown

Our Future Coast Programme Manager

The Morecambe Bay Curriculum

Together, practitioners around Morecambe Bay are weaving environment and place into everyday teaching, so that every young person can be a change-maker. This award-winning network supports schools, colleges and teachers across all ages and phases of education to work together, putting education around Morecambe Bay on the map.

The future of education must prepare our children for unfolding challenges. Together, our network and community have been facing these challenges head-on, focusing on sustainability and environment and ensuring its relevance by exploring these topics through the lens of where we live. Teachers have shaped this model themselves, using the head, heart and hands pedagogy to ensure learning focuses on how environment connects to health, green skills and a sense of belonging. This work has caught the attention of the government, change-makers and leaders nationally and beyond. The next challenge is to work out together, how we can continue to embed this work more deeply into everyday learning.

Together, Lancaster University, Lancaster and Morecambe College, University of Cumbria and Eden Project are working collectively to ensure MBC opportunities remain free at point of access for everyone around Morecambe Bay. Here are ways in which you can join us:

Ways to get involved:

1) Sign up and join the MBC community

You'll receive regular email updates, support and opportunities for you and your school, college or early years setting.

2) Embed resources into your teaching/curriculum

All our resources are designed to link into the National Curriculum and are under-pinned by the Head, Heart, Hands Pedagogy. They have been designed in partnership with local educators to ensure they are relevant to your learners.

3) Climate Action opportunities for your learners through Our Bay Our Future

Thanks to the National Lottery's Community Fund, we have designed free programmes for children and young people of all ages that allow them to get curious, grow their confidence and look after our local area.

4) High quality CPD for educators and youth practitioners

Join our community of practice and build your skillset through our MBC Green Working Groups, the Our Bay Our Future Green Fellowship, regular workshops and our annual conference. Hear more by signing up as a member of our network.

Find out more by scanning the QR code



Head, Heart and Hands in your Classroom

At Morecambe Bay Curriculum, our pedagogy is developed around Head, Heart and Hands. These three dimensions, which typically equate to knowledge, values and skills, enable us to move beyond subject knowledge alone and support children and young people to grow in more holistic and transformative ways. We use the three concepts flexibly across different age phases to connect children and young people with the Bay:



Head: Critically engaging with current knowledge through cognitive tasks and learning key concepts through local examples.



Heart: Developing positive values, empathy, connections, compassion and care through engagement with locally relevant issues.



Hands: Applying knowledge to develop skills, take action and increase participation in local contexts.

Within each resource, you will see how the three dimensions can be applied to ensure that the education we provide is relevant, engaging and speaks to the lives of children and young people around the Bay.



Embedding the Morecambe Bay Curriculum

The Morecambe Bay Curriculum supports teachers and pupils across all ages and phases to engage with their local area in ways that champion environmental sustainability and encourage care and compassion for both human and more-than-human life. Across the resources, we have developed age-appropriate ways of working and engaging with the MBC's lesson plans, schemes of work and supporting materials.

Research-informed advice on how you can embed this work in your setting:

Early Years – Cultivating awe, wonder and curiosity: Finding the joy in nature!

The early years approach is driven by psychological research which emphasises the importance of curiosity-driven learning, question-asking, developing a sense of wonder and creativity. From teddy bears to technology, we encourage children to get outdoors, so they can stop, take notice and find new ways of seeing the world.

Primary – Developing personal connections and knowledge of place

Children develop their understanding and love of where they live through outdoor learning, place-based examples, storytelling and creative practice to bring STEM, Geography and local history to life. This cross-curricular approach focuses on ecology, biodiversity, geographical features, history, the impact of humans and the intersections of art and science.

SEND – Caring for where we live, our communities and for ourselves

Learners who are historically more likely to experience nature-deprivation are supported to access Morecambe Bay in educational and experiential ways. Accessibility, inclusion, care and communication are at the heart of this practice.

Secondary – Critical thinking skills and practical action

Critical thinking, reflection and action are developed through engagement with complex issues, for example, energy poverty, mental health, coastal protection and decolonisation. Identifying solutions, participating in debates and taking practical action, are key to ensuring students remain hopeful and engaged.

Alternative Provision – Relatable and relevant outdoor learning

Relevant, place-based and outdoor learning can re-connect students with education in ways that feel curious, skills-focused and encourage regulation. Resources link students to broader skills which support future careers and provide ways of recognising these achievements.

Further Education – Exploring green careers and entrepreneurship

FE resources encourage action on personal and collective levels. Led by student interests, this work is inspired by the idea that 'every career in the future will be a green career'. Work in FE is student-led but underpinned by cutting-edge thinking on future skills, economic regeneration and green jobs.





Morecambe Bay Curriculum in practice

Our principles

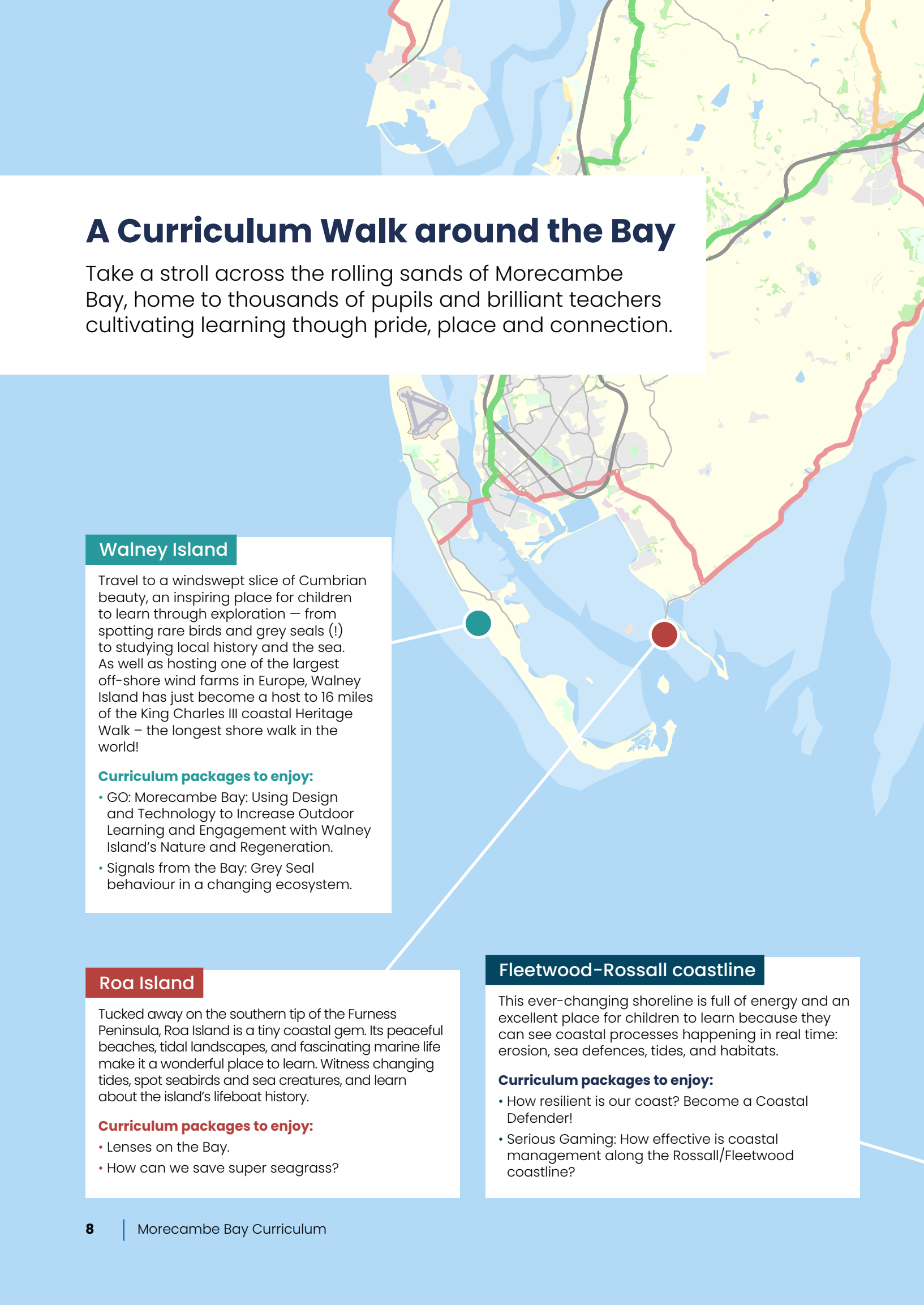
Our community's key recommendations for all educators are:

- **Embed Head, Heart, Hands into your practice** so that it becomes second-nature to consider all three aspects when delivering lessons.
- **Weave place-based and environmental learning across the curriculum**, not as a standalone subject. As you embed resources and plans, you'll find further links between subjects. Be creative and keep asking yourself where place-based examples will help make learning memorable, meaningful and relevant.
- **Consider your local area and your school grounds** and how they can link to learning. Can they provide real-life examples? What is there to celebrate and what is there to care for? How can you adapt resources for your context?
- **Explore opportunities for outdoor learning**, both within the curriculum and beyond it. This encourages regulation, helps develop new ideas and is great for health. If you can't embed outdoor experiences directly, how could technology, homework or enrichment activities be used?

How to connect

We also encourage you to connect with each other! As members of the MBC, you are part of a wide network of educators, academics and organisations who aim to provide a better education for all. A key principle is that we are stronger together. Make the most of being part of this network of like-minded people:

- **Look out for CPD opportunities**, share good practice and explore how to embed these resources into your setting. Our website and newsletter are good places to start!
- **Local charities, organisations and businesses want to connect to your learning** – check out the Recommended Partners page on the MBC website! Support collaboration and learning across colleagues, ensuring educators can connect with each other and their broader vocation. Place-based environmental education is a shared endeavour, you should never feel alone!
- **Build momentum** through the right champions at different levels of your setting, from teaching assistants to governors. Check out our climate action plan template on the MBC resources webpage which outlines how to develop a whole school approach.
- **Celebrate** your local area, celebrate the Bay, celebrate learners and celebrate yourself!



A Curriculum Walk around the Bay

Take a stroll across the rolling sands of Morecambe Bay, home to thousands of pupils and brilliant teachers cultivating learning through pride, place and connection.

Walney Island

Travel to a windswept slice of Cumbrian beauty, an inspiring place for children to learn through exploration – from spotting rare birds and grey seals (!) to studying local history and the sea. As well as hosting one of the largest off-shore wind farms in Europe, Walney Island has just become a host to 16 miles of the King Charles III coastal Heritage Walk – the longest shore walk in the world!

Curriculum packages to enjoy:

- GO: Morecambe Bay: Using Design and Technology to Increase Outdoor Learning and Engagement with Walney Island's Nature and Regeneration.
- Signals from the Bay: Grey Seal behaviour in a changing ecosystem.

Roa Island

Tucked away on the southern tip of the Furness Peninsula, Roa Island is a tiny coastal gem. Its peaceful beaches, tidal landscapes, and fascinating marine life make it a wonderful place to learn. Witness changing tides, spot seabirds and sea creatures, and learn about the island's lifeboat history.

Curriculum packages to enjoy:

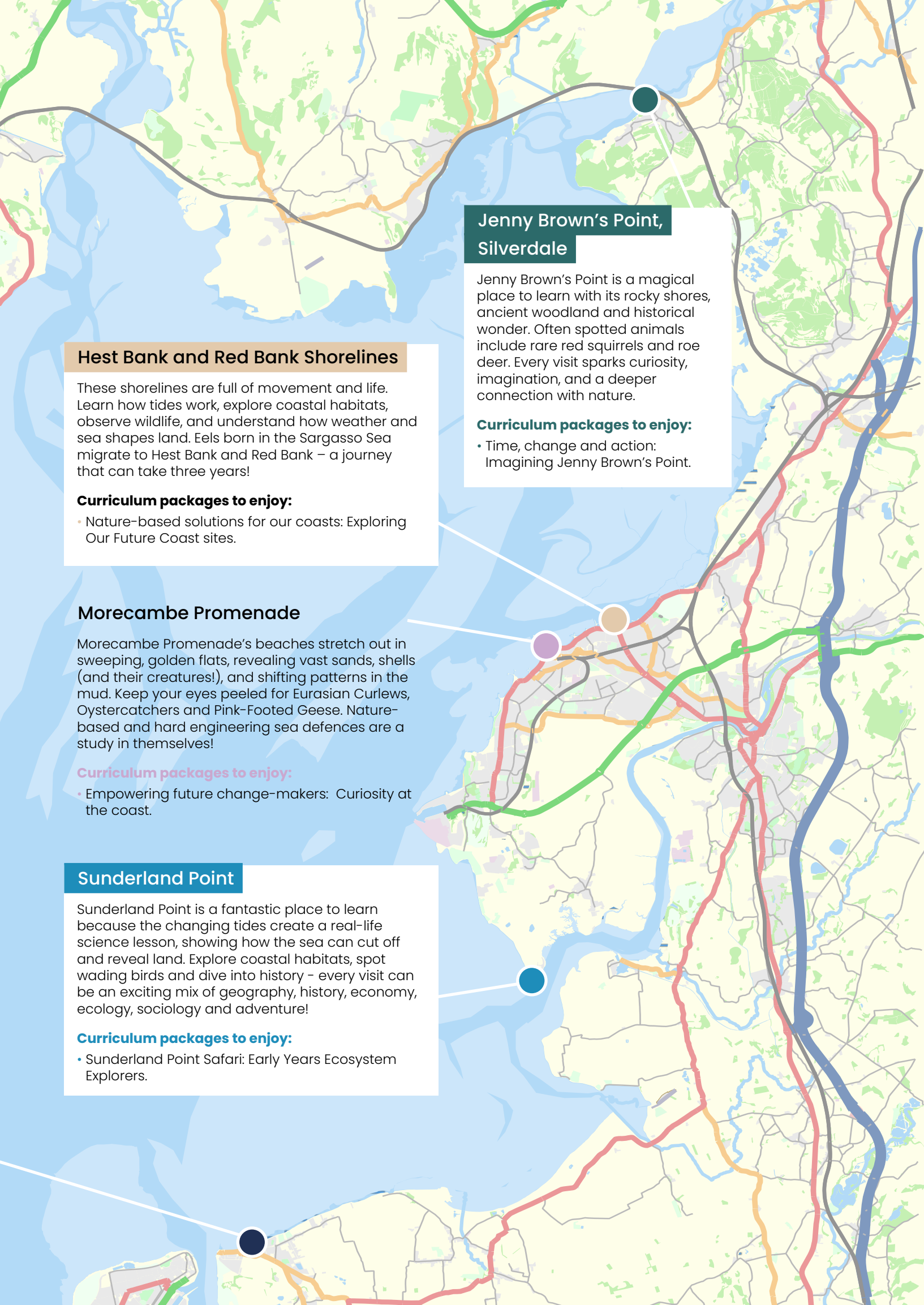
- Lenses on the Bay.
- How can we save super seagrass?

Fleetwood-Rossall coastline

This ever-changing shoreline is full of energy and an excellent place for children to learn because they can see coastal processes happening in real time: erosion, sea defences, tides, and habitats.

Curriculum packages to enjoy:

- How resilient is our coast? Become a Coastal Defender!
- Serious Gaming: How effective is coastal management along the Rossall/Fleetwood coastline?

A map of the Humber region in England, showing the Humber estuary and surrounding land. The map is color-coded with green for land, blue for water, and various colored lines (red, orange, green, blue, black) representing different types of routes or boundaries. Several locations are marked with colored dots: a dark green dot at the top right, a purple dot, an orange dot, a blue dot, and a dark blue dot at the bottom left. Lines connect these dots to text boxes providing information about each location.

Hest Bank and Red Bank Shorelines

These shorelines are full of movement and life. Learn how tides work, explore coastal habitats, observe wildlife, and understand how weather and sea shapes land. Eels born in the Sargasso Sea migrate to Hest Bank and Red Bank – a journey that can take three years!

Curriculum packages to enjoy:

- Nature-based solutions for our coasts: Exploring Our Future Coast sites.

Jenny Brown's Point, Silverdale

Jenny Brown's Point is a magical place to learn with its rocky shores, ancient woodland and historical wonder. Often spotted animals include rare red squirrels and roe deer. Every visit sparks curiosity, imagination, and a deeper connection with nature.

Curriculum packages to enjoy:

- Time, change and action: Imagining Jenny Brown's Point.

Morecambe Promenade

Morecambe Promenade's beaches stretch out in sweeping, golden flats, revealing vast sands, shells (and their creatures!), and shifting patterns in the mud. Keep your eyes peeled for Eurasian Curlews, Oystercatchers and Pink-Footed Geese. Nature-based and hard engineering sea defences are a study in themselves!

Curriculum packages to enjoy:

- Empowering future change-makers: Curiosity at the coast.

Sunderland Point

Sunderland Point is a fantastic place to learn because the changing tides create a real-life science lesson, showing how the sea can cut off and reveal land. Explore coastal habitats, spot wading birds and dive into history – every visit can be an exciting mix of geography, history, economy, ecology, sociology and adventure!

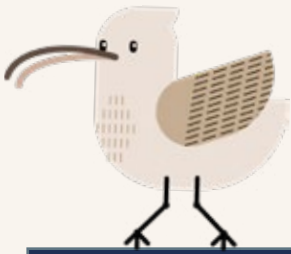
Curriculum packages to enjoy:

- Sunderland Point Safari: Early Years Ecosystem Explorers.

Research informed teaching resources

Below is an overview of the resources created by educators and academics. If you would like to download the accompanying information, lesson plans or powerpoints, check out the resources pages on the MBC website.

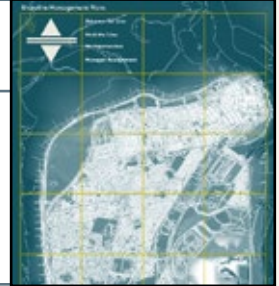
EYFS Understanding the World	Early Years Ecosystem Explorers Sunderland Point Safari	
Predicated on the simple questions 'Who lives here?' (birds, invertebrates), 'What kinds of things should be here?' (pebbles, seaweeds, mud) and 'What should not be here?' (plastics), let little ones take a trip into the weird and wonderful world of Morecambe Bay's muddy sediments. Teeming with hidden life, learn to use 'who,' rather than 'what' to nurture an early sense of empathy with other living beings amongst the vast mudflats that meet the edge of the Bay.		
EYFS Understanding the World	Empowering future change-makers: Curiosity at the Coast	
Strolling by our promenade's eye-catching features targets children's natural curiosity and sense of wonder. This resource supports well-being and resilience in times of change. Through simple hands-on activities, children build a sense of relationship and connectedness to the place, whilst advancing their knowledge of their local coastline and nature-based solutions!		
Primary History	Time, change and action: Imagining Jenny Brown's Point	
The mysterious character of Jenny Brown through the ages is used as an exciting liaison to introduce students to different episodes of local history. Go on a Silverdale journey with her to gather powerful local knowledge, learning about the value of social and generational knowledge as a vital way in which we come to know about the past of our localities.		
Primary Geography	How Resilient is our Coast? Become a Coastal Defender!	
Fly through this work and coastline with Colin the Curlew and become an informed coastal defender! Using role-play this game puts pupils at the heart of decision making, much like the real-world work of Our Future Coast. Facing challenges as a team and developing their knowledge with cutting-edge research, pupils make choices based on Shoreline Management Plans to connect knowledge to positive transformation of their own community.		
KS3 Physical Geography	Nature-Based Solutions for our coasts: Exploring Our Future Coast sites	
By applying project design processes, students will be encouraged to creatively find sustainable solutions to the threats facing salt marshes. Using new knowledge of nature-based solutions and the threats to their local coastlines, students engineer suitable structures to support restoration and protect their communities. Their knowledge of Our Future Coast's work is embedded through real life application!		



KS3
Geography

Serious Gaming: How effective is coastal management along the Rossall-Fleetwood Coastline?

Through an interactive table-top gaming experience, pupils will develop an understanding of local coastal communities and the pressures they are under. Employing critical-thinking and decision-making, they will focus on the choices that councils, local government and national government are faced with and understand that making these decisions will impact them now and in the future.



SEND

How can we save super seagrass?

Wade into the wonderful world of seagrass! Learn about how their fascinating meadows perform many vital functions because of their uniqueness. Enjoy a sensory exploration of experiences teaching children about conservation in their local environment and encouraging them to ask questions about what they can do to help their environment. They can even apply their new knowledge by creating a seagrass support!



FE:
Art and Design

Lenses on the Bay

Use the Flexagon Notebook to connect directly with your surroundings. Engagement with coastal environments is a great way to challenge learners to think critically about place, human and non-human inhabitants and the multiple futures imagined. An over-reliance on mobile technologies can generate distance and skew the experience towards one that is mediated by technology. Explore this resource and explore the bay first-hand!



FE: Animal Care and Management

Signals from the Bay:
Grey Seal behaviour in a changing ecosystem

How can animal behaviour help us protect the natural world? This cutting-edge learning involves understanding how changes in behaviours can act as an early warning system for environmental disruption. Using video footage of grey seals from Walney Island, students will learn how scientists observe, record and analyse behaviours such as feeding, social interactions and vigilance to detect signs of stress before populations begin to decline. Discover how to take action to protect ecosystems before serious damage occurs!



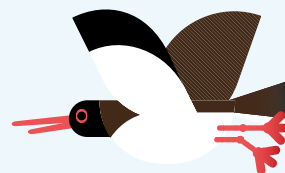
Alternate Provision
Years 7 to 11

GO: Morecambe Bay: Using Design and Technology to Increase Outdoor Learning and Engagement with Walney Island's Nature and Regeneration

GO: Morecambe Bay is a phygital (physical-digital) activity which uses simple yet exciting Augmented Reality (AR) technology. This enables learners to creatively and critically interact with the natural and human-made geography, ecology and the climate of Walney Island and surrounding Barrow area. Focus on local histories, celebrations of place and engage in badge-collecting challenges so that decision making becomes a fun and strategic act!



Co-design in your Classroom!



Co-designing curriculum resources has been an exciting six-month process, where ten local educators from around Morecambe Bay, inspired by Our Future Coast, were matched with Lancaster University academics with expertise in place, environment and sustainability. The pairings were matched to ensure that all ages and phases can access resources that explore nature-based solutions for the North-West coast, pulling on classroom expertise and cutting edge research.

This co-design process was led by Dr David Pérez Ojeda, Lecturer in Radical Co-Design from Lancaster University's School of Arts.

Co-Design Principles for the Classroom, by Dr David Perez Ojeda

These three principles describe the conditions that make co-design work in a classroom. They are interconnected, not sequential. And running through all three is a single commitment: to inclusivity, to asking who is present, whose knowledge counts, who feels safe enough to speak, and whose voice actually shapes what happens.

Principle 1: Grounded Purpose and Shared Agency

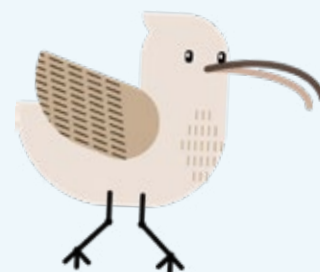
Co-design starts with the people in the room. The purposes that drive the work should come from the participants themselves, drawn from their lived experiences and their relationships to the places they know. When students are invited to bring their own knowledge and perspectives into defining what matters, something shifts. The curriculum stops being something done to them and becomes something they are genuinely part of shaping. Agency is not a bonus feature of good co-design. It is the point.

Principle 2: Creating Safe and Caring Spaces

People take risks when they feel safe. They share honestly, push back, and say the things that actually matter. That kind of safety does not arrive on its own; it has to be built, and it can be quietly dismantled by unexamined power or careless facilitation. A caring classroom is one where the question of who feels able to speak is never treated as settled. It is asked again and again, throughout the process.

Principle 3: Designing for Collaboration

Collaboration does not happen because people are in the same room. It has to be designed for. That means thinking carefully about the structures, materials, and conditions that make genuine engagement possible, and being deliberate about who participates, how, and on what terms. When those conditions are well considered, students do not just take part. They shape the work. Their presence leaves a mark.



More research-informed teaching resources

The Morecambe Bay Curriculum community have co-designed lots of resources which are easily adapted to your classroom. Some of these have been created by teacher/academic pairs, others by our brilliant working groups who act as a community of practice. Start exploring these today and see how they can fit with your own curriculum plans. You might also find some excellent ideas for enrichment or extra-curricular activities.

Early Years Resources

- **Little Bay Explorers:** Understanding the world through curiosity and wonder.
- **Near and Far, High and Tiny:** Looking and Listening in our Bay.
- **Learning with Eden Bear:** Getting adventurous whilst caring for ourselves and others.

Primary Resources

- **Science and Art:** The Birds of Morecambe Bay.
- **Science:** Rhythms of the Bay: Living things and their habitats.
- **Geography:** A day at the beach: Present and Future.
- **History:** The King's Guide to the Sands.
- **English:** Local Legends and Made by the Moon.
- **Engineering:** Grow It and Grab It.
- **Why Walk?:** Supporting nature-connection and health.

SEND Resources

- **Special Educational Needs (SEND):** adapting MBC resources for all learners.
- **Nature Ninjas:** Building connections to nature through the seasons.

Secondary Resources

- **Geography:** Energy generation or energy conservation? Which method is the future for Morecambe Bay?
- **History:** What have colonialism and empire got to do with sustainability and development?
- **PSHE:** Wellbeing and Blue Spaces: Using creative methods to explore connections to blue spaces and build resilience.
- **D&T:** Flight Investigations: Curlews vs the Airbus A380-800.
- **Science:** Making Plants Pop: Weaving local plant knowledge into your teaching.

Alternative Provision Resources

- **MBC Skills Portfolio:** Developing new skills in the outdoors.

Further Education Resources

- **Construction:** Sustainable construction and Biomimicry.
- **Travel and Tourism:** Eco tourism: A comparative study of local, national and global tourist locations.
- **Agriculture:** Understanding the impact of food choices.
- **Sports Turf Level 3:** Flood Risk: Climate change adaptation (measures) and mitigation (action).
- **Green Side Hustle Challenge:** Resources to set up an environmental entrepreneurship challenge at your college.





Our Bay Our Future provides exciting free climate action projects and opportunities for young people (and those that support them!) around Morecambe Bay.

Our Bay Our Future programmes use the 'head, heart and hands' approach to learning about and caring for the Bay. They are designed to help children and young people of all ages to grow the values, skills and knowledge needed to care for where we live and secure local green jobs. Our programmes have been designed alongside the Morecambe Bay Curriculum community, to ensure toddlers to adults can engage with climate awareness, action and leadership. Find out more on the Morecambe Bay Curriculum website.

**Find
out
more
here**



Thanks to National Lottery players, £1.5million from The National Lottery Community Fund will support more than 5000 local children and young people through Our Bay Our Future.

Opportunities for children to get curious about nature

Green Connections

Inspiring curiosity and care for nature in young children and their parents in early years settings. Ages 3-7.
Led by Morecambe Bay Partnership.

Green Researcher's Badge

Helping children build a deeper connection with the environments around Morecambe Bay by supporting them to research and answer their own questions. Suitable for all settings, this flexible programme is designed to take place in-schools or outside, in your local youth or uniformed groups. Ages 10 and under.
Led by Morecambe Bay Partnership.



Acknowledgements

The **Morecambe Bay Curriculum** is an educator-led movement and a cross-sector partnership supported by Lancaster University, Lancaster and Morecambe College, University of Cumbria and the Eden Project.

We are delighted to partner with Our Future Coast to deliver teaching resources that work with nature to safeguard our coastal communities. This project is part funded by Defra through the £200 million Flood and Coastal Innovation Programmes which are managed by the Environment Agency.

Thank you to everyone who made this work possible!

- Thank you to all the schools and colleges who have released teachers to be part of this work including Beetham CE Primary School, Bowland High School, Dallam School, Great Wood Community Primary School, Lancaster & Morecambe College, Sandcastles Nursery Morecambe, Sandside Lodge School, Shakespeare Primary School and South Cumbria PRS.
- Thank you to the educators and teachers who have brought so much passion and expertise to this work.
- Thank you to Lancaster University academic colleagues for bringing your research and curiosity to the project.
- Thank you to the Morecambe Bay Curriculum and Our Future Coast teams for bringing this work together.

With thanks to the Morecambe Bay Curriculum Working Groups and our Steering Group for all their support.

Tell us what you think!

Let us know how you use any of the MBC resources by scanning the QR code to send feedback. We would love to hear from you.



Funded by



Department
for Environment
Food & Rural Affairs



Environment
Agency

Flood and coastal resilience innovation programme

Part of the £200m Flood and coastal innovation programmes

With additional support from



Lancaster &
Morecambe
College

Opportunities for young people to take meaningful local action for the planet

Green Futures Award

Young people will be collectively supported to conceive and deliver community-based climate action projects. This flexible programme is designed to take place in-school or outside, in your local youth or uniformed groups. Ages 11-15.

Led by Morecambe Bay Partnership.

Green Passport

Explore climate action through the lens of your own career aspirations. This programme will be open to all FE students, sixth-form students, community organisations and university students. Ages 16+.

Led by Lancaster & Morecambe College.

Next Gen Entrepreneurial Challenge

Lancaster University's 'Entrepreneurs in Residence' support groups of young people develop a sustainable business idea, with prizes for the winning idea! Ages 16-19.

Led by Lancaster University Management School.

Green Leaders

Empowering young people to develop their own funded climate action project in response to a local problem. This six-month programme will enable change-makers to develop leadership skills, trial new ideas and grow a network of like-minded friends. Ages 16+.

Led by Lancaster & Morecambe College.

Opportunities for practitioners who want to support young people to care for our Bay!

Green MBC Working Groups

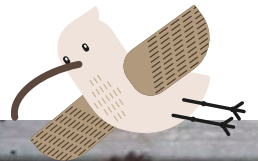
A continuation of our current MBC working groups, throughout 2027 and 2028, we will regularly bring together 60-70 practitioners to share practice and create projects for children and young people of all ages, on the theme of climate action.

Led by Lancaster University.

Green Fellowship

An intensive and inspiring year long CPD opportunity for practitioners who support young people and want to weave climate action into their everyday work.

Led by University of Cumbria.





Lancaster &
Morecambe
College



University of
CUMBRIA

eden project

Lancaster
University



www.lancaster.ac.uk/morecambe-bay-curriculum
mbc@lancaster.ac.uk