



# Sunderland Point Safari: Birds, Beaks and Minibeasts

## EYFS: Understanding the World

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### Specialist knowledge for teachers

This resource is designed to nurture an early sense of curiosity and wonder towards the wildlife of Morecambe Bay, introducing the idea that wildlife lives here 'on the doorstep,' and providing the foundations for a longer-term sense of care for nature. It offers a combination of direct experience through a visit to the bay and making creative responses back in the classroom, including listening to and moving to music (as a bird or an invertebrate) and games that include age-appropriate ways into species identification.

The sight of dunlin, knot or oystercatchers swirling in thousands over Morecambe Bay's incoming tide is one of the UK's greatest natural spectacles. The bay is an internationally important habitat for some 240,000 birds, including ringed plover, curlew, avocet, little and arctic terns, godwit, eider and gulls. Many species travel vast distances to overwinter on the bay or to breed here in the summer months, including the longest distance migrant - the Arctic tern - which travels a phenomenal 70,000km from the Antarctic. In short, Morecambe Bay is an exemplar of an interconnected living system, with birdlife entirely dependent upon the intertidal sands, saltmarshes and mudflats and the millions of marine invertebrates within those ecosystems. Each species exploits a different layer in the muddy sediments to avoid competition and coexist in the same habitat, but due to environmental and climate pressures, many avian species are in decline. We cannot take the bay's health for granted.

Marine invertebrates are a keystone species, breaking down detritus such as seaweeds and other naturally occurring materials. Science, however, tells us that microplastic pollution is a growing problem.

Plastics in the wider environment do not biodegrade but continue breaking down into ever-smaller pieces. (The term microplastics is used to describe pieces smaller than 5mm). Microplastics in Morecambe Bay originate from local shorelines, the Irish Sea and are carried by rivers out from the Lake District. To assess the extent of the problem, ecologists from Lancaster's Centre for Ecology and Hydrology and Master's student Dan Harvey collected invertebrates from various locations around the bay and from the River Leven. Photographs were taken in the lab using a fluorescence microscope, revealing the presence of microplastics in the evacuated guts of tiny species including rockpool shrimp, copepods, ragworms and elvers (baby eels that migrate thousands of miles to here from the Sargasso Sea). Microplastics travel up into the food chain, including into the seabirds who depend on those same invertebrates.

Through a half-day visit to Sunderland Point (or other appropriate location on the bay) this resource facilitates direct encounters with the bay's living systems and is predicated on the simple questions 'who lives here,' (birds, inverts) 'what kinds of things should be here' (pebbles, seaweeds, mud) and 'what should not be here' (plastics). When referring to wildlife (the more-than-human species we share the Bay with) we suggest the term 'who,' rather than 'what' as a way of nurturing an early sense of empathy with other living beings.

The resource keeps the use of screens to a minimum; first-hand exploration, thinking, feeling and responding are the primary learning experiences.



# Curriculum aims and objectives

This work covers the curriculum outcomes for EYFS Development Matters – Understanding of the World (Reception) & Expressive Arts and Design (Reception).

The focus is on children experiencing, appreciating and learning from the natural world. This is an important start to scientific and environmental education which is crucial for our children growing up in a rapidly changing world.

Through a visit to Sunderland Point the children will be learning to:

- explore the natural world around them
- describe what they see, hear and feel whilst outside
- draw information from a simple map
- recognise some environments that are different from the one in which they live
- to listen attentively, move to and talk about music, expressing their feelings and responses (in school)

The children will also be using values such as 'respect', 'responsibility' and 'thoughtfulness' (amongst many others) by learning about looking after and caring for our environment.

As well as building important knowledge, the children will be building on their vocabulary of the natural world and ecosystems. Enriching and widening children's vocabulary will support later reading comprehension.

## Head

Increase and enrich the children's knowledge and language specific to the coastal habitats and nature of Morecambe Bay.

## Heart

To develop empathetic connections – our wild neighbours, including the values of kindness, respect and responsibility, and to ask 'who,' rather than 'what' lives here. To facilitate the growth of a real love of being in nature.

## Hands

The children will build on their skills of exploration and observation in the context of our local coastal habitat and marine ecosystem. The nature-based, practical activities will promote curiosity, critical thinking and problem solving.

**“We cannot protect something we do not love, we cannot love what we do not know, and we cannot know what we do not see.” - Richard Louv**



# Exploring Muddy Sediment – Who Lives Here?

Practical Activity



## Resources

- Trowels or spoons
- Deep tray (white is a good colour for viewing the invertebrates)
- Small bottle/tub of water from the river
- Magnifying glasses or magnifier viewing pots
- Invertebrate identification chart

**At time of printing, all these resources can be borrowed, free of charge, from the Mission Heritage Centre. Please use the contact form on the website if you would like to book them.**

<https://sunderlandpointmhc.co.uk/>

## Activity



**WARNING – PLEASE STAY ON THE STONES AT THE EDGE OF THE MUD – THERE IS VERY SOFT/SINKING SAND JUST OFF THE SHORE. CHILDREN MUST NOT GO IN THE MUD (however tempting!)**



Either an adult or children (well-supervised) collect a small sample of mud and put it into the white tray. Add water (from the river/mud so the salinity is the correct level for the invertebrates). Gently disperse the muddy sediment and let it settle. Look carefully to see what you can see moving in the water.



Can you identify any invertebrates from the picture chart? Have you discovered something not on the chart? Perhaps you can photograph it and identify it when you get back to the classroom.



Please return sediment and invertebrates to the place they were taken from and let the children know this what you are doing because it is their habitat and they will only survive there.

## Adaptations to extend impact

This resource is easily adaptable for use with children in the pre-school year and in Year One through the questions asked and expected outcomes.

- Although the resource is designed for use at Sunderland Point (where many of the resources required are available to book for free) the same activities can take place at other locations around Morecambe Bay, subject to site health and safety checks, and resources available.
- Foulney Island and South Walney both have colonies of breeding birds in the summer and are managed by Cumbrian Wildlife Trust's seasonal wardens. Why not try to book a visit and talk from the warden? CWT phone number - 01539 816300
- Research other sources of music for the dance, eg Cosmo Sheldrake's 'Flora's Pond' or 'Seals'



### For Further Information:

- For an accessible essay on microplastics in the Bay's marine systems, see 'Inside the Rockpool Shrimp there is a Dying Star,' in *Earthworks: Land and Nature in Uncertain Times*, Karen Lloyd (Saraband, 2026)
- A one-minute video on microplastics can be found here: <https://oceanservice.noaa.gov/facts/microplastics.html>
- Here's an article on what microplastics are and why they are a problem, plus some scientific solutions: <https://www.ukri.org/news-and-events/lives-and-livelihoods/climate/uncovering-the-hidden-impacts-of-microplastics/>
- Dr Karen Lloyd, who co-designed this resource, has written some other fantastic books about our local area. Check out her work at <https://www.karenlloyd.co.uk>

