

## Our Coast & Climate Change: Coastal Erosion (for P4+)

TIMINGS	ACTIVITY	NOTES	RESOURCES
10 mins	Initial prep and move to suitable outdoor site (for running)	Establish base of knowledge about climate change and the impact on our oceans. Pupils may talk about sea ice melting and litter.	To learn about climate change, you can use <a href="#">Biosphere Explorers Workshop 4</a>
5 mins	Erosion basics	Ask if pupils can define erosion (you may wish to link this to the ocean acidification experiment where the shell was eroded). Ask them to consider how land can be eroded by water of all kinds and then focus on seas. How does climate change worsen coastal erosion? Via rising waters and storm surges.	Further reading: <a href="https://www.bbc.co.uk/bitesize/articles/z7rwdp3">https://www.bbc.co.uk/bitesize/articles/z7rwdp3</a> & <a href="https://thefloodhub.co.uk/ks2-lesson-6/">https://thefloodhub.co.uk/ks2-lesson-6/</a>
5-10 mins	Erosion Tag: Round 1	Explain that pupils will be the soil and that the 3-4 pupils who are 'it' are the sea. Once tagged, pupils must stand out of the game boundaries. Either let all pupils be tagged or call the game if going on too long.	
10 mins	Erosion Tag: Round 2	Remind pupils the meaning of the game – that water is eroding the soil away. Now add in a second component. Set the boundaries of the game and explain that the adults, and any pupil who gets tagged out, will stand in a line to represent the coast. Repeatedly	

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		<p>over the course of the game, as one, take several steps in, to reduce the area that pupils can play in. This is representing the rising seas.</p> <p>You may wish to play a couple rounds of this.</p>	
5 mins	Visual: Water vs Compost	<p>Explain that you will show pupils how their tag game reflects real life.</p> <p>Show how exposed and loose compost is lost through a plant pot when water is added to it (a small plant pot will fit into a plastic cup, so pupils can see the dark water collect). You can send them off to look around the school grounds for bare mud and consider how rain impacts on it vs soil under vegetation.</p>	<p>Plant pot, water, plastic cup, handful or two of compost.</p> <p>Alternatively you can do the soil experiment or simply view the experiment video (start at 2 minutes; if you use 'picture in picture mode' you can skip to 2 minutes.</p> <p><a href="https://www.carboncentre.org/copy-of-biosphere-explorers">https://www.carboncentre.org/copy-of-biosphere-explorers</a></p>
20+ mins	Empathy/Drama task	<p>Start off asking pupils to imagine they are cliffs and their cliff friends are being eroded by the sea. Ask them how they'd feel, and let them list a few different emotions. Ask how they might try to get another person to feel the same emotion in a story – or ask how stories (read or</p>	<p>You can have a longer discussion on how to use dramatic techniques to communicate the plot and meaning of the play.</p>

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		<p>watched) make them feel happy or sad.</p> <p>Divide pupils roughly into groups of 4-5. Give them each a different storyline around coastal erosion, for example:</p> <p>There are some families who live on the coast, they have to move out because the cliffs keep crumbling into the sea, they must move in with other families or move away entirely and everyone in the school has to say goodbye to them.</p> <p>A big storm washed away the local football pitch, and you are a group of reporters interviewing the local people who describe the impact it's had on the town.</p> <p>You're all coastal animals whose habitat is shrinking because it's being washed away, and humans haven't made space for you. You have to try and work together to get the humans to listen and help.</p>	
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		<p>The spirits of the land itself have awoken to find themselves under threat of coastal erosion. What do they do next?</p> <p>At a family holiday, older generations of the family remember the village they grew up in – which is now abandoned to the ocean – and tell the younger generations stories about it.</p> <p>Before sending them off to areas to rehearse, ask them to think about the different roles involved in plays e.g. narrator, sound tech, actors, directors, and remind them that they need to communicate the problem of coastal erosion and climate change in their play in some way.</p>	
10 mins	Peer Feedback	<p>Assign each group to another. They are responsible for giving feedback about the play. Questions can help scaffold their answers, like:</p> <p>What did you like best about the play?</p>	

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		<p>What helped you to understand what the play was about?</p> <p>Did you feel like the ending fit the play well?</p> <p>What emotions did you feel during the play?</p> <p>Did you find it easy to sympathise with the land/animals even though you are human?</p>	
5 mins	Quick Discussion	<p>It is worth pausing here and talking about how the UK has plenty of land and that only some parts of our coastline is at risk from erosion, and there are ways that we can protect our coastline (if you live near coastline with such measures, you can talk about them here).</p>	<p>Additional info for teachers: Play around with the settings on <a href="#">this interactive model</a> to understand how our coastline could change. It is worth exploring the video tutorial to understand the model.</p>
5 mins	End of session recap	<p>Ask pupils what they did and learnt during this session. You may wish to do a quick grounding exercise if some pupils have been concerned during the session. This lesson is not necessarily linked to any action pupils can take – our coastline is already changing and the importance is on awareness, adaptation and resilience, not just on preventing further changes.</p>	<p>Climate emotions can be hard to navigate – but don't be wary of them. Emotions are key to taking action (on any topic), and the important thing is to build resilience in feeling them (rather than shutting them down and becoming apathetic). Mindfulness activities, talking or writing through emotions, grounding exercises, and identifying actions we can take all help.</p>