



Activity 4

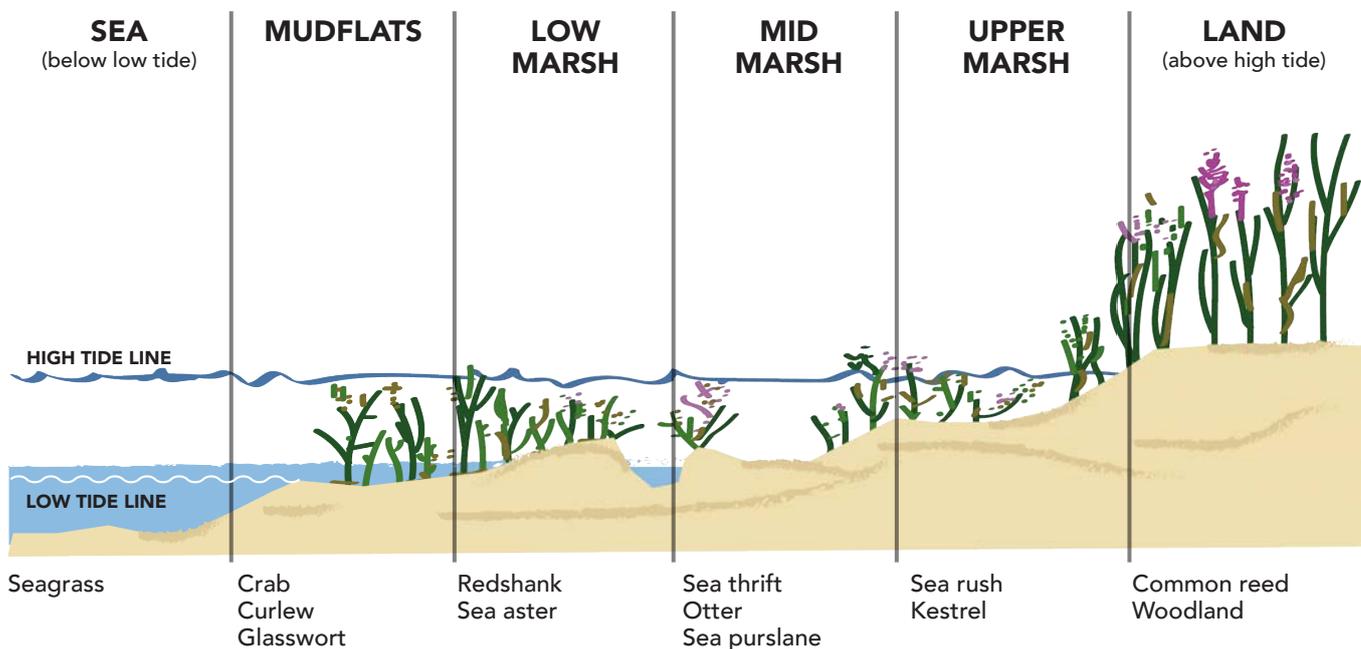
# Living with the Tide

**Equipment required:**

- Copy of 'Presentation 4: Living with the Tide' and device to share with learners
- Print out of the 'Saltmarsh Zones and Tides' worksheet, one per learner
- Internet enabled devices and internet access
- A clear tray, tub or shallow box (e.g. plastic storage box, plant tray, or baking dish)
- Something to create the levels of saltmarsh, e.g. modelling clay, recycled card, craft materials or LEGO bricks in various colours
- Craft materials to represent marsh vegetation, e.g. sponges, scrunched tissue, or green paper
- Paper, card, or small labels to mark areas and name species
- Glue, scissors, tape, and pens/pencils
- Blue ribbon or strips of paper to show how far the tide reaches
- Tablet, camera or phone (optional)

**To complete the activity:**

1. (Slide 4) Share drone video with learners [www.tiramor.cymru/saltmarshes](http://www.tiramor.cymru/saltmarshes) (Resource 2). Ask learners to share what they notice as the drone travels from the mudflats to the upper marsh.
  - How do the plants change? (Do they get taller? Denser? Change colour?)
  - Where do you think the tide reaches at high tide? Why do you think that?
2. (Slide 5) Introduce the key features of a saltmarsh. Support learners to identify the various zones, from mudflat to land. Support learners to identify where various species live:
  - Where would you most likely find a crab?
  - Which bird species are you likely to find in the lower marsh?





3. (Slide 6) Show the time-lapse video of a saltmarsh during a tidal cycle: [www.tiramor.cymru/saltmarshes](http://www.tiramor.cymru/saltmarshes) (Resource 3), and ask learners to describe:

- What changes?
- Is the tide coming in or going out?
- What disappears or reappears?
- How might this affect plants and animals?

Explain that tides shape saltmarsh life and that saltmarshes protect our coasts by acting as soft coastal defences, absorbing wave energy, trapping sediment, and reducing erosion.

4. After exploring the time-lapse video and discussing how the tide changes the saltmarsh, encourage learners to complete the 'Saltmarsh Zones and Tides' worksheet to consolidate their understanding. Support them to label the zones of a saltmarsh and draw an example of an animal that might live in each zone. To link with real-world data, encourage learners to look at 'BBC Tide Times' - [www.tiramor.cymru/saltmarshes](http://www.tiramor.cymru/saltmarshes) (Resource 4) for their nearest coastal location and record the times of the next high and low tides. Encourage them to think about how often high and low tides occur in a day and what this means for saltmarsh plants and animals. Ask learners to calculate the time difference between high and low tides and to compare tidal heights.

5. (Slide 7) In small groups, support learners to build a cross-section of a saltmarsh in a tray or box using modelling materials, natural items, clay or LEGO. The goal is to understand the different zones of a saltmarsh and learn which plants and animals live in each one.



ADDITIONAL  
**TASK**  
Optional

(Slide 8) Invite learners to make a short video presentation of their saltmarsh model. In their recording, they could describe the different zones, point out the animals and plants they included, and explain how tides affect the habitat. They might also like to explain how living things are adapted to survive in the changing conditions of the saltmarsh.



# Saltmarsh Zones and Tides

Using the word bank, can you label the saltmarsh's key features?  
In each circle, draw an animal or plant that you may find there.

Mid Marsh

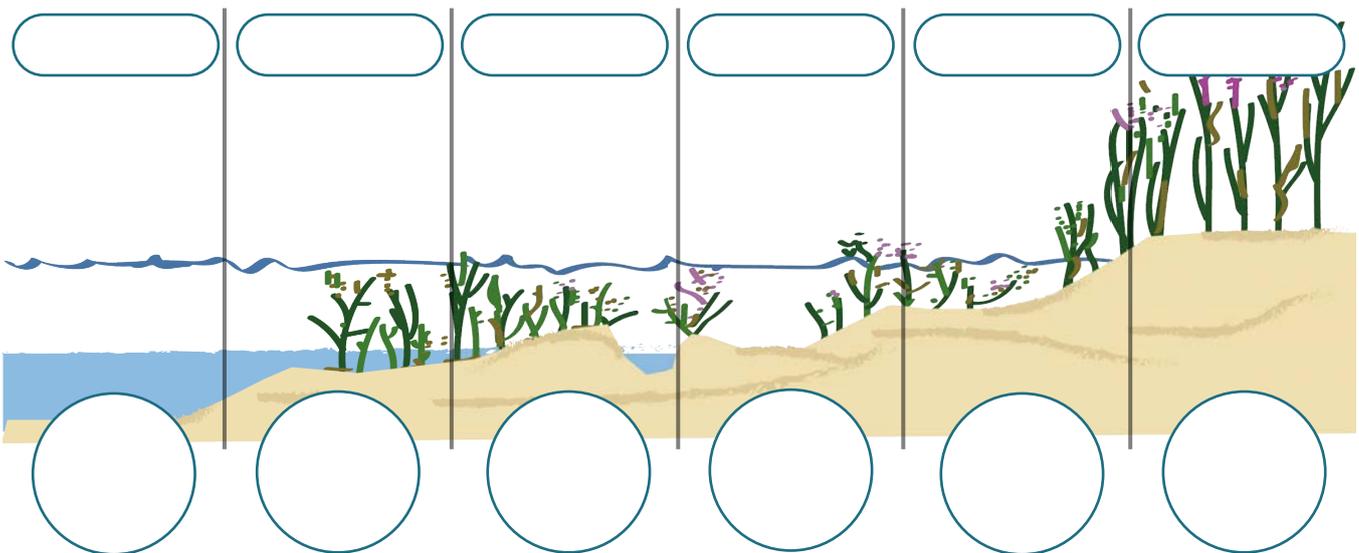
Land

Mudflat

Upper Marsh

Sea

Lower Marsh



Go to BBC Tide Times - [www.tiramor.cymru/saltmarshes](http://www.tiramor.cymru/saltmarshes) (Resource 4) to find your nearest coast.  
Write down:

- Next high tide: time \_\_\_\_\_ height \_\_\_\_\_
- Next low tide: time \_\_\_\_\_ height \_\_\_\_\_
- How many hours apart are the high and low tides? \_\_\_\_\_
- What is the difference in height between them? \_\_\_\_\_
- How many high tides happen in one day? \_\_\_\_\_



A hectare of saltmarsh can capture two tonnes of carbon a year and lock it into sediments for centuries.