

# Marine Ecosystems



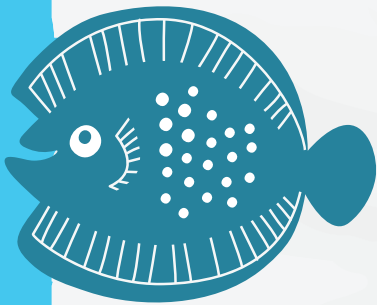
Lyme Bay  
Fisheries and  
Conservation Reserve



## Lesson Plan & Extension Activities

*A series of tasks and  
challenges about marine  
ecosystems found in and  
around Lyme Bay*

**KS2 & KS3**



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# Ecosystems in Lyme Bay

## Lesson Aim

To understand how food chains and food webs work in a marine ecosystem.

## Learning Outcomes

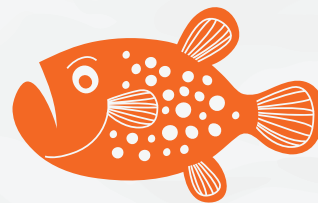
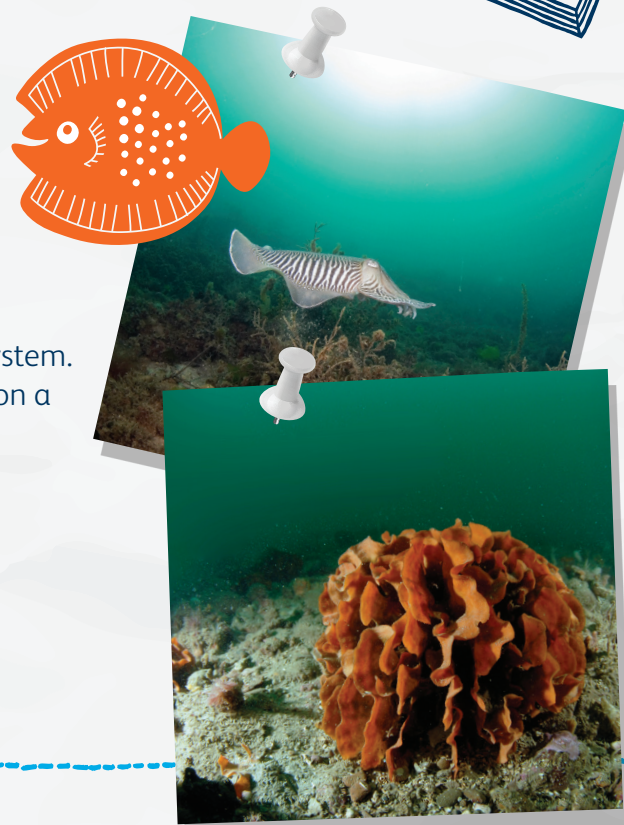
To apply knowledge of food webs to a real ecosystem.  
To understand the consequences of overfishing on a marine food web.

## Resources

- ➔ Powerpoint
- ➔ Videos
- ➔ Worksheets

## Powerpoint Discussion

- What is an ecosystem? Ask the pupils if they know then confirm with powerpoint.
- What is in the Lyme Bay ecosystem? Ask them to come up with ideas, some should be right some not. Then show them the slide with list on and ask them if they have any more ideas.
- Show video footage and pictures of the Lyme Bay ecosystem. How many did they guess? Is there any they didn't? Encourage pupils to think about how the different species would interact with each other. What eats what? What lives in what? Why?
- Ask if they know how some of these organisms interact with each other.
- Mainly focusing on feeding relationships but also on habitat (pink sea fans and coral)
- Refocus group onto food chains
- Do they know what one is? What do they generally have in them – show slide so they see key words.
- Link to Lyme bay.
- Introduce food webs, how food chains link together.
- Show Lyme Bay food web and hand out worksheet.
- Pupils complete the worksheet
- Discuss what happens if something changes? Eg sand eels get an illness and they all die what happens the rest of the food web.
- What can you see on the food web that people eat?
- Link to the fact that humans feature in most food webs. How might we be impacting on the natural ecosystem?
- Focus on scallops – what happens if we catch too many scallops?
- How has Lyme Bay overcome the problem to ensure balance?



## Extension Activities

### Make your own food chain

Choose one of the food chains covered in the session and make a model of it for a display.

Pupils can be creative when making these and can use pictures from the internet, collages of coloured paper, papier mache, real objects (eg scallop or crab shells).

Try to include information about each species in your food chain. Eg size, life cycle, average life span, habitat, are the migratory?

Make a model food chain (see separate sheet)

### Let's go fishing!

There are many different species of fish that are caught in Lyme Bay for commercial reasons. Some are listed here. The minimum catch size for each species is:

Red Mullet - 25 cm

Bass - 42 cm

Black Bream - 23 cm

Pollack - 30 cm

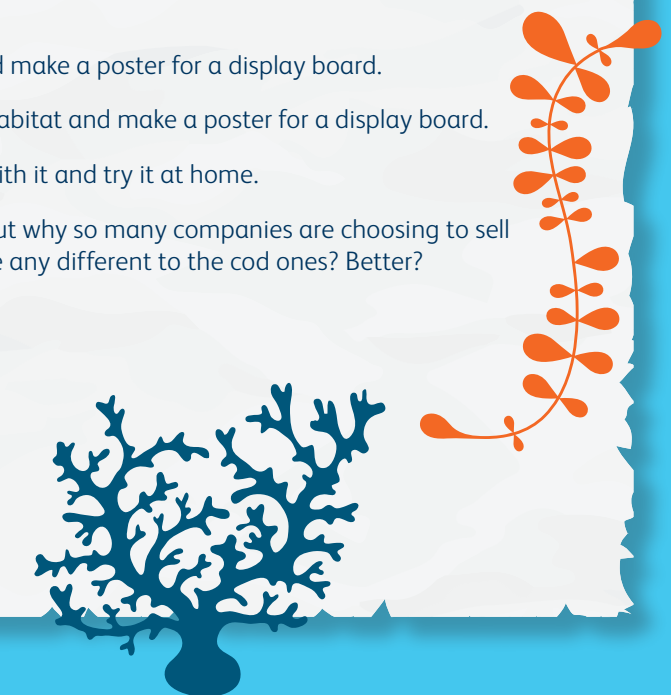
Mackerel - 20 cm

Lemon Sole - 25 cm

To ensure that undersized of young fish are not caught the fishermen use specially made nets to catch the larger fish and let the smaller ones through.

### Task suggestions:

1. Choose one of the fish and find out about its life cycle and make a poster for a display board.
2. Choose one of the above species and find out about its habitat and make a poster for a display board.
3. Choose one of the above species and find a nice recipe with it and try it at home.
4. Lots of places now sell fish fingers made of Pollack. Find out why so many companies are choosing to sell Pollack instead of cod. Have you tried them? Do they taste any different to the cod ones? Better?
5. For tasks 1 and 2 try to make life size drawings of the fish.





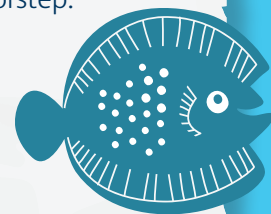


**The Schools Outreach Programme is delivered by the Lyme Bay Fisheries and Conservation Reserve – a marine reserve in Lyme Bay, which straddles the border between Dorset and Devon and is funded by Marks and Spencer.**

The Lyme Bay Reserve is facilitated by the Blue Marine Foundation (BLUE) – a marine conservation charity which aims to solve the crisis in the oceans through providing innovative solutions to overfishing and enabling the creation of marine reserves.

BLUE's pioneering work in Lyme Bay uniquely engages fishermen to take a lead role in the conservation of their fishery providing long term benefits to marine life, fishers and the local community. In celebration, BLUE has established a Schools Outreach Programme to inform the wider public – young and old – about the quiet revolution that has happened on their doorstep.

For more information about our School's Outreach Programme email: [info@lymebayreserve.co.uk](mailto:info@lymebayreserve.co.uk) or visit [www.lymebayreserve.co.uk/education](http://www.lymebayreserve.co.uk/education)



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## **We'd love to hear what you thought...**

We are constantly improving our Schools Outreach Programme and your feedback would be extremely beneficial to us. Please take five minutes to fill in the feedback form emailed to you once you have tried out these activities so that they can be improved as necessary to make the activities the best they can be – thank you.



Facilitated by the Blue Marine Foundation



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