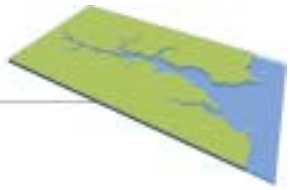


PRIMARY ACTIVITIES

Feeding and Food Webs

Chain Gangs
This is an energetic way of acting out food chains.
Split the class into groups of 4 or 5. Ask the class where all the energy in the food chain originally comes from (the sun!). Ask each group to sort out who will be the sun.
Then ask what traps the sunlight and turns it into food (plants and plant plankton). Get each group to sort out who will be the a plant and what sort of plant they will be.
Continue through all the trophic levels until each child has a role. Then ask each group to act out their food chains in front of the others. This is where the gory sound effects and feeding behaviours of predators and prey come out!

This works best if each group acts out a different food chain.

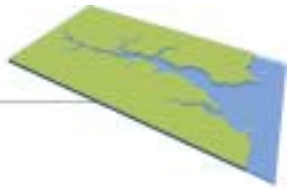
Tangled Webs
This game illustrates how all plants and animals are linked and rely on each other in food webs. It can get chaotic and is best done in small groups of about 10 – 15 children. It also works better after a brief discussion on food webs and where the different animals and plants fit in.

You will need a ball of string.

Gather the children around you in a group, all standing but with some space between them. Explain that you are the sun and the start of all food webs. Ask 'who needs the sun?'. Whoever answers 'plants' (or 'seaweed' or 'plant plankton') gets connected to the 'sun' by the string. Then ask 'who eats the seaweed?', whoever answers correctly becomes that animal and the string connects them to the seaweed. Continue through the food chain connecting each child with the string. At the end of the food chain, bring in the idea of detrivores who eat dead things to show how the chain never really ends.

Build up the 'web' until every child has a role and is connected. It will become very tangled at this stage! You can now explore what would happen if one plant or animal was killed or removed from the web, eg: by pollution or overfishing. The child who is the effected animal or plant pretends to die and sits down. Because they are all still connected, the string will now pull tight on those attached. Everyone who feels a tug on the string must sit down too.

It should work so that all the children are eventually sat down and you can discuss how everything in the food web is connected and if one part is killed or removed,



it effects the whole web. This is also a good way of highlighting how humans can damage the balance of an ecosystem and why we must do our best to manage and conserve marine life.

Food Chain Mobiles
For this activity you will need:
- Card
- Pens and pencils
- Scissors
- Thread
- Coat hangers or wooden canes

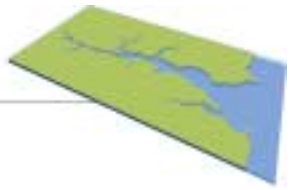
Look at different food chains and discuss who eats who on the shore.
Get the children to draw their own selection of seashore / marine animals on the card, cut them out and colour them on both sides. Ready made animal pictures can be photocopied and used as templates to make things easier. Make sure they have plants (seaweed or plankton) to start the food chain, various herbivores, carnivores and one top predator in their cut outs.

Fix the top predator onto the coat hanger or cane and then hang the other animals below it using the thread to build up the food chain. The plants should be on the bottom 'layer' of the mobile.

Food Chain Sculptures
This is a good activity for the beach and can be used to get children working in small teams towards a common purpose and understanding. They'll often start to make sand castles so why not make this exercise a useful one!

Discuss food chains and the relationship between predator and prey. Get the class to make up their own food chain, starting with the plants and working up to the top predators. Divide the class into small groups and assign each to one of the plants or animals from their food chain. Space the groups appropriately and ask them to create their plant or animal from the things they find on the beach – a sand sculpture.

Once all groups have finished, make a point of going along the food chain with the children and connecting each plant or animal up. This can be done with bits of driftwood, pebbles, or by making a sand arrow. The sculptures can be judged and points awarded to each group for the number of different natural things used (and whether they can name them!). Please stress that they must only use dead material and not touch living plants or animals.



Ice Cream Sandwiches!
This activity is probably not a good idea to do with the whole group, but good as a demonstration. The idea is to show how different creatures have adapted specific methods for feeding that suits their diet, and eating anything else with the same method won't work!

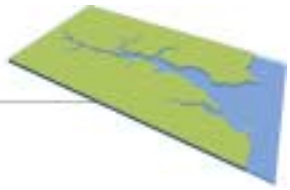
You will need:
- Ice cream (well melted)
- small crackers / bite sized food
- a crusty french stick.

Pick 3 children and explain that each one can only feed in a certain way. One can only lick (but not bite), one can bite without using their hands, and one can only use their hands to break off small pieces and bring the food to their mouths. Discuss with the group which of the three types of food each child is adapted to eating and ask them to eat a little of that food, ie: licking and ice cream, breaking off crusty bread with hands etc. Easy enough with the right adaptations! Make the links between the child's adaptations and real sealife, ie: a limpet, a sea urchin/fish, a crab etc.

Now swap the food around and ask the children to try eating them. Good combinations that will point out the difficulties are: trying to pick up melted ice cream with fingers, trying to bite melted ice cream, trying to lick a French stick or a cracker. A big mess and lots of hilarity will ensue! Point out that eating food without the right feeding adaptations is both difficult and wasteful.

Filter Feeders
This experiment shows how filter feeding works, the method used by lots of animals living in the sea such as sponges and seasquirts, tube worms and even whales and basking sharks.
You will need:
- A sieve
- A plastic funnel
- 2 clear plastic containers
- A jug of water
- A circle of filter or blotting paper
- Some 'bits' – sand, gravel or pebbles.

Mix the 'bits' with the water to make a 'sea soup'. Put the sieve over the first container and pour all the soup through the sieve. Discuss what happens with the class.
Next fold the circle of filter paper into four and open out between the folds to make a pocket that fits inside your funnel. Put the funnel over the second container and



pour the already sieved water through the filter. Again, watch what happens and discuss the results.

The ‘bits’ have been separated from the water by ‘filtering’. Many animals do the same thing in the sea. They suck in seawater, filter out the bits of food from it and then squirt out the rest.

Dolphin / fish tag

This activity, adapted from the classic ‘bat and moth’ game, introduces the concept of echolocation, the sonar that dolphins use to navigate and catch their prey.

Stand the group in a circle - they are responsible for looking after and guide the blindfolded "dolphin". Explain echo-location and pick one dolphin and one fish from the group and stand them in the circle. Blindfold them both. The dolphin must tag the fish and can only find them through echo-location, ie: every time the dolphin shouts "dolphin" the fish must reply "fish" thus allowing the dolphin to hunt it. Make sure the rest of the circle is quiet. Their role is to gently give two taps to either ‘animal’ that goes too near the edge of the circle. Add extra fish if need be and make it more fun by getting the players to act like the animal they are meant to be.