

Section 3- Food Chains



Activity 1

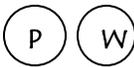
Introduction

Think about familiar food chains e.g. where do we get milk? What does the animal eat to get the energy to produce the milk? Cows eat plants, grass/clover, they are herbivores. Where does the grass get its energy? Draw the diagram on the board with the arrows showing the flow of energy sun > grass > cow (milk) > human. The children can then think of other familiar food chains and record them.



Activity 2

Marine Food Chain card game



You will need

Prepared plant/animal pictures on card and laminated, several large drawn arrows to indicate the flow of energy in the food chain.

Use PowerPoint provided to illustrate concept of a food chain. Discuss vocabulary, producer, consumer, predator, prey, omnivore, carnivore, and herbivores.

Activity

The activity can be done in pairs or groups, finding groups of plants/animals in a food chain or it can be done with a large group in an open space. Give each child a card. The children can then find the other members of their food chain. Once they have found

the members of their chain they must decide which is consumer and which is producer. They then decide which way the arrows would point in the food chain to show the energy flow.

Complete food chains worksheet.



Activity 3

Food Pyramid activity

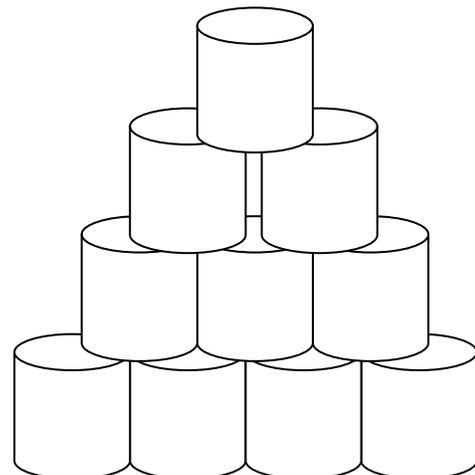


This activity will illustrate the interdependence of living things in their habitat.

You will need

Empty cans (e.g. beans tins to use to create a pyramid) paper, felt pens, coloured pencils.

Children work in groups, cover each can with plain paper. Draw organisms in food chain and label, starting with plants, e.g. plankton, on each can. Build the food pyramid with the cans. To illustrate their interdependence, remove sections (tins) watch pyramid collapse.



Activity 4



Food Web game



This activity will illustrate the interdependence of living things in their habitat.

You will need

Labels to wear around neck or make head bands with name (and/or pictures) of different plants and animals which live in the bay, a ball of string.

How to play

Give each child a label with a plant or animal on it. Children form a circle. Can any child see anything which they might eat or which might eat them? The string is used to link the plants/animals together. An animal may eat or be eaten by more than one organism. Continue linking plants and animals using the ball of string until a web is created. Ensure that each child holds their string taut.

Once the web has been created, point out that a habitat can change and that this can have an effect on the plants and animals living there. Relate this to overfishing.

Describe a scenario where a scallop dredger destroys the maerl in the bay. How will this affect the other living things living in the bay?

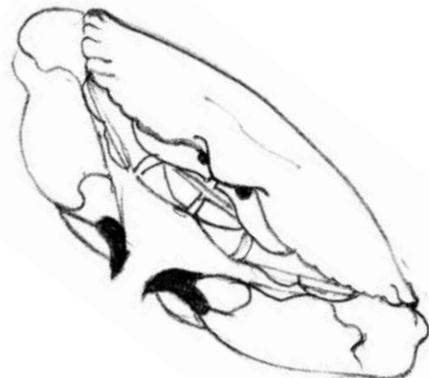
Remind the children to hold their string taut. Ask the children who are labeled as maerl to gently shake their string. Can any

of the others feel anything? Explain that what happens to one species will affect another in the food chain. What will happen to the animals which live in the maerl bed? The sponges, sea squirts, crabs, scallops will lose their habitat, or be destroyed. Ask these children to drop their string. Observe what happens to the web. What will happen to the other species which depend on the above for food or shelter? Gradually drop more and more parts of the web, i.e. species, illustrating the interdependence of plants and animals in their habitat.

“When one tugs at a single thing in nature he finds it attached to the rest of the world.”

John Muir

What does this mean? Children could do some research into John Muir.





Activity 2 Marine Food Chains



All living things are connected.

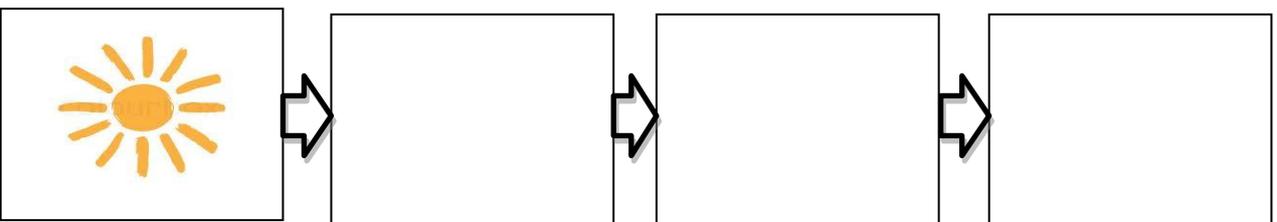
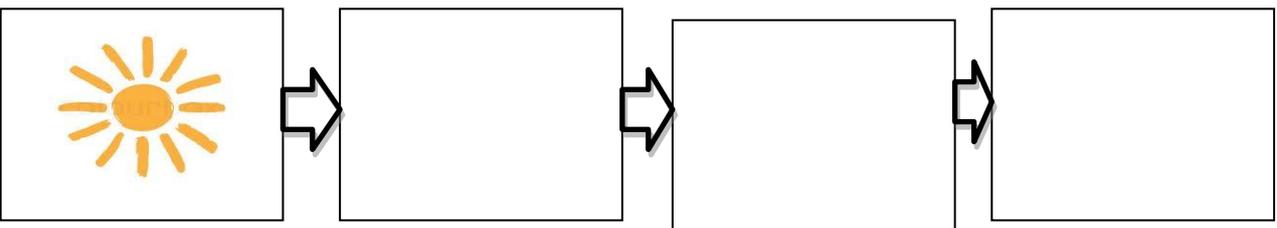
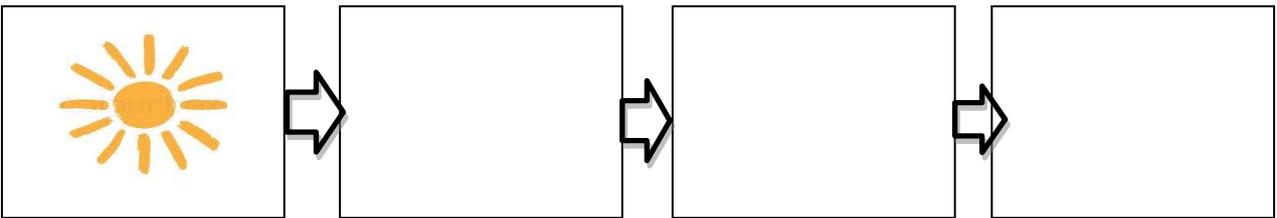
Everything in the sea is connected.

A marine snail eats seaweed.

The snail is then eaten by a fish.

The fish is eaten by a seal. This is called a food chain.

Use the marine plant and animal cards to make food chains. You can use each card more than once if you need to. Use them to complete food chains below.

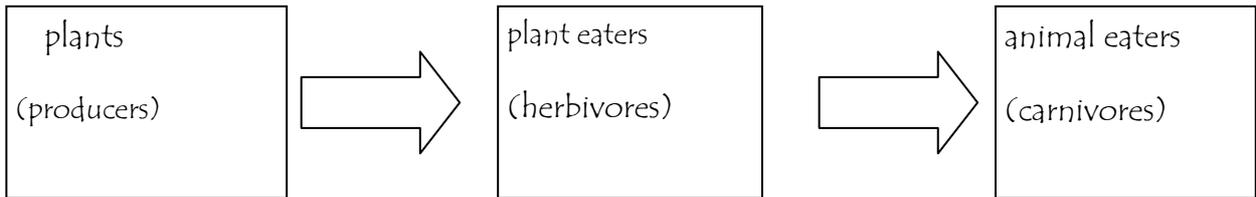


Now use string and card to make a food chain mobile.

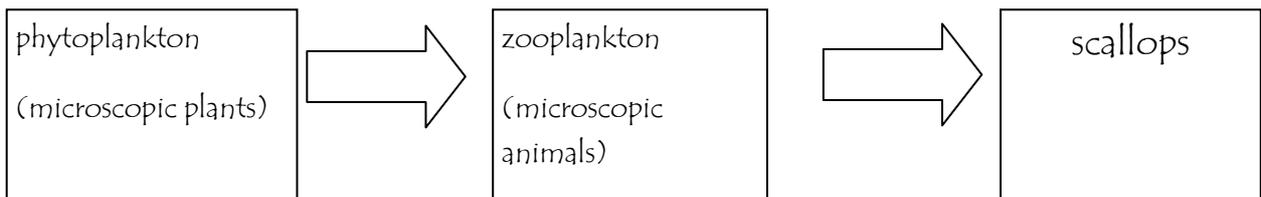
Activity 3 Food Chains and Food Pyramids.



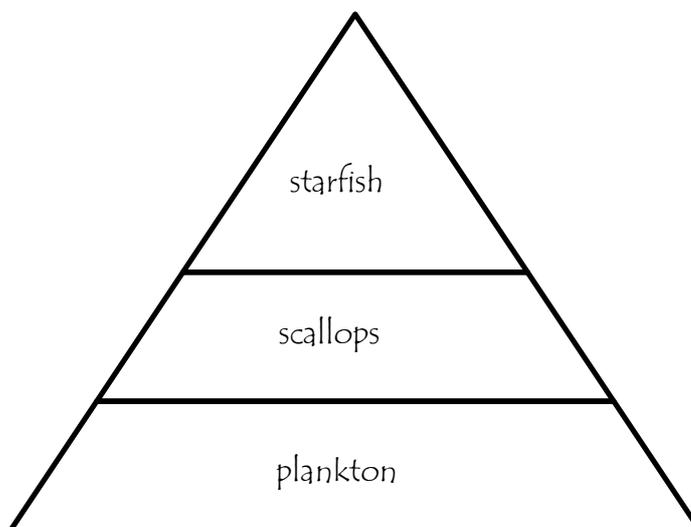
Food chains describe the flow of energy through an ecosystem, from the sun, through the green plants to the animals. The plants are called **producers** because they can make food using energy from the sun and simple chemicals in the water. **Herbivores** feed on the plants and in turn, are eaten by **carnivores**.



For example, in Lamlash Bay



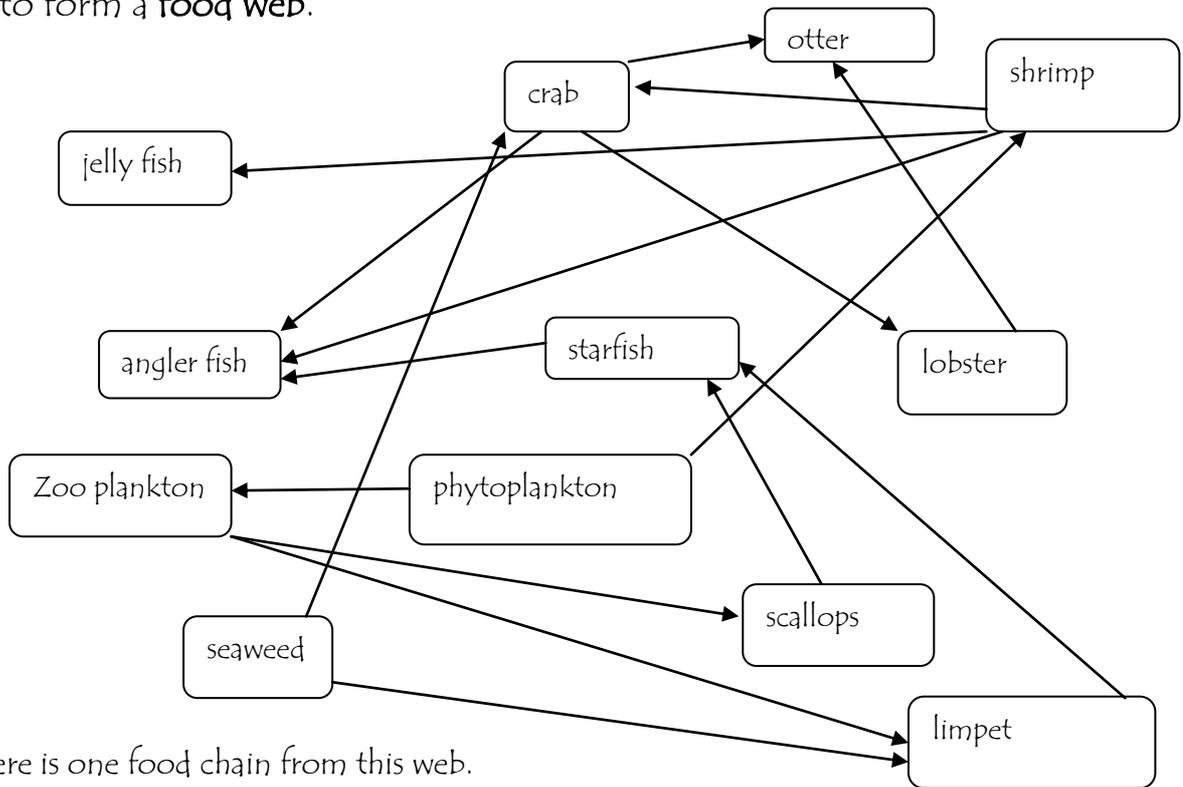
Food chains are sometimes drawn as pyramids, to show that it takes many organisms lower down the chain to feed the top carnivores or predators.



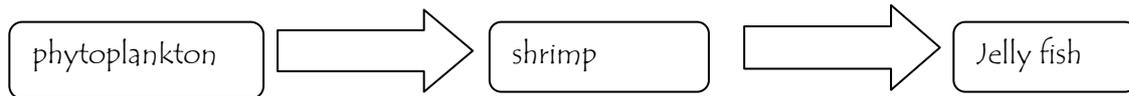
Activity 4 Food Chains and Food Webs.

Food webs

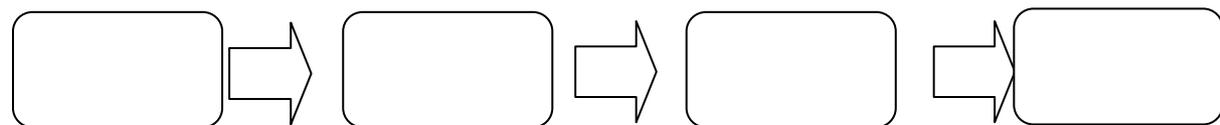
In an ecosystem such as Lamlash Bay, many food chains exist and they cross link to form a **food web**.



Here is one food chain from this web.



How many food chains can you make using the organisms in this web. Make some with three organisms and some with four. Remember to start each food chain with a plant.



END OF SECTION THREE