



Treasure hunt

This activity should get children exploring the beach and thinking about the origin of the things they find.

Background for group leaders

The muddy and sandy shores of sheltered beaches hide lots of animals whose pretty shells appear after storms. More exposed beaches are rocky, their seaweed and animals are strongly attached to withstand the waves. After storms strandlines are thick and full of treasure including beautiful shells and the colourful tests (skeletons) of sea urchins.

Strand lines are also strewn with man-made debris: - from the land, beach goers, fishing, shipping and sewage. The amount of litter on our beaches has increased by 149 % since 1994, partly because we use more plastic and this does not break down. Sea glass is pretty and fish boxes are useful but other rubbish kills wildlife.

An average North Sea fulmar has 44 pieces of plastic in its stomach. Balloons, plastic bags and cigarette lighters are eaten by birds, fish, turtles, and whales, which mistake them for jellyfish and squid.

A world-wide beach clean in 2008 recovered 1.4 million plastic bags in just one weekend. Heart wrenchingly birds also feed plastic to their chicks.

Other debris such as netting and packing bands strangle, drown and injure birds, fish and sea mammals. A million seabirds and 100,000 sea mammals are thought to be killed by litter every year.



Even tiny pieces of disintegrating plastic are eaten by barnacles, lugworms and sand hoppers. On some British beaches a third of strandline "sand" particles are actually plastic.

Preparation

Ideally some of the more unusual items on the treasure hunt list (page 4) would be collected prior to this activity so that children can see them. Pictures are provided in case this is not possible. Children can work alone or in groups of up to four. Each group will need a treasure hunt list.

What you will need

Each group of children will need a treasure hunt (page 4) and a small bag (reused please), bucket or fruit punnet to put their treasure in. You will also need pictures or examples of less common items (pages 5 and 6).



Fun follow-up and Links

Children could thread or tie shells, twine, feathers etc. onto string to make dream catchers. Treasure could also be used as a prompt for art, writing or telling a story about a trip to the beach or the imagined experiences of a particular object. As an example children could investigate and imagine where a piece of litter had come from or a day in the life of a shellfish or sea urchin.

Groups might also consider organising a beach clean. Alternatively they could design a poster or newspaper article to persuade people not to drop litter at the beach, or in their toilet!

- <http://www.mcsuk.org> and <http://www.sas.org.uk/campaigns/marine-litter/> for good information on the problems of litter and how to arrange a beach clean.
- <http://www.plasticoceans.net> gives information and video clips about plastic pollution on our beaches.



Let's start, instructions for the beach

Instructions for group leaders

Maximum activity duration: 45 minutes

Children can work alone or in groups of up to four. Each group will need a treasure hunt list and a container to put their treasure in. You might like to set out boundaries within which the children can search. While, the items can be found in sandy areas, if possible some areas close to rocks should be accessible.

When you have finished be sure to return living items to the area in which they were found. Check for hermit crabs! It is particularly important to return winkles, whelks and crabs to rocky areas near the sea.

- Warn children **not to touch litter that is dirty or sharp**. Also ask them not to harm animals by kicking them off rocks or squashing them.
- Children are not expected to find all of the items on the list as they are not found on all beaches. The bonus items are quite rare and hardest to find.
- The items highlighted below might be unfamiliar and should be shown or described to children before they begin hunting. Ideally you will have real items to show the children but if not pictures are provided on pages five and six.
- The treasure hunt should take about half an hour. When children return you can check their treasure and ask them to describe the smell and animal sign that they have remembered. Perhaps award points for each item with extra points for the bonus items.
- Now draw three circles in the sand for seaweed, animals, and man-made things. Ask children to put their treasure in the correct circle. You can then talk about the different types of items they have found using the notes given. Try to decide where man-made things have come from; discuss how they could harm wildlife and ways of reducing beach litter.



Shells with perfect holes



A sea potato test



An egg case

Dog whelks drill **perfect holes** into shells then they pump their digestive juices inside and suck the poor inhabitant out!

Shells with **two halves** are common, they include mussels, cockles and mermaid's fingernails. Children should find a shell where the two halves are attached.

Sea potato tests are the skeletons of sea potatoes. They are fragile and it is hard to find one intact. Sea potatoes live buried in the sand; when they are alive they are covered in spines.

Fishing floats are used to mark nets and lobster pots, in big storms they are lost and wash up on the beach.

Egg cases once contained tiny dogfish or skate; they should be attached to seaweed but can be dislodged in storms. (The shark trust runs a brilliant nationwide egg case hunt and you can join in, <http://www.eggcase.org>)

Animal signs include foot prints and the squiggly casts of lugworms.

Where did this come from? Facts to tell children



On sandy beaches lots of creatures are buried and we only see them when they are washed up by storms. Sometimes we can also see their signs on the beach. Burying creatures you may have collected include mermaid's fingernails, sea potatoes and razor shells. You may also have seen signs of lugworms.



Most animals cannot bury into rock. What can they do instead? They stick very strongly to rocks so that they are not washed away. Winkles, limpets and starfish have very sticky feet and mussels use sticky string to stay in place. The shells of these animals wash up when the animal inside dies.



Can you think where the man-made things you have found came from? Some are probably from boats, - you might spot some fishing net and floats. Other things are from people that visit the beach or from litter that blows onto the beach from the land. Other things come from our sewage, which is why it is very important to think before you flush! No plastic in the toilet!



A plastic bottle could spend 450 years on a beach before it breaks down into tiny pieces of plastic.



When they are in the water plastic bags look like jelly fish or squid. Birds, turtles and even whales eat them up and this makes them very ill. So **always take your litter home!**



Plastic bottles will take hundreds of years to disappear.



Packing bands are very strong and can strangle large animals such as seals.



Treasure hunt

To collect:

1. A small pebble
2. A feather
3. Something from humans
(nothing dirty or sharp)
4. A shell with a perfect hole in it
5. A shell with two halves
6. An egg case **BONUS!**
7. Some bright green seaweed
8. A sea potato test
9. A pink shell
10. A yellow shell
11. A crab claw or shell **BONUS!**

To remember:

1. A smell!
2. The sign of an animal



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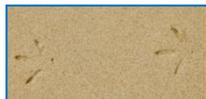
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Pictures to show children when real objects have not been collected in advance.



Shells with two halves include these mermaid's fingernails



Sea potato skeletons are called tests they are very fragile.



Dog whelks drill circular holes in their prey and suck out the insides!



Skates and dogfish make eggs like this. They should be attached to seaweed but are sometimes washed up in storms.