

Section 2- Sorting Classifying, Variation



Activity 1



Introduction

Discuss with the children that classification is comparing and organising things in groups and that this is something scientists do. They classify animals and plants according to their distinguishing features.

Sort common objects into various groups according to their properties e.g. shape, size, colour. Allow the children time in their groups to sort objects, justifying their groupings, giving explanations for their choices. They can begin by sorting according to their own criteria and then by given criteria.

Introduce the 'marine life' cards, children sort according to characteristics, using both their own criteria and given criteria.



Activity 2, 2a

Which group?



Using the PowerPoint resource illustrate how animals can be divided into two sub groups, vertebrates (animals with a backbone), invertebrates (animals without a backbone). Introduce the five common vertebrate groups and some invertebrate groups. Explain that this is a system which all scientists use so that there is no

confusion when people are naming animals and plants, in a similar way to why we use a standard unit of measure.

Children can complete 'Which group?' worksheets for invertebrates and vertebrates. Alternatively this activity could be done practically on large paper with the picture cards provided.



Activity 3

Classifying echinoderms

Explain to the children that biologists use keys to identify plants and animals they find. Use the Power Point provided to illustrate the use of a classification key.

Complete the 'Classifying Echinoderms' worksheet. The children could then devise their own classification key about children in their class. Firstly list characteristics which they could use and devise questions. For example is the person male or female? Brown eyes/blue eyes? Wears glasses?

They could gather the data needed first and then make their own key. Alternatively the children could use the sorting picture cards to create their own classification key.



Activity 4



What am I?

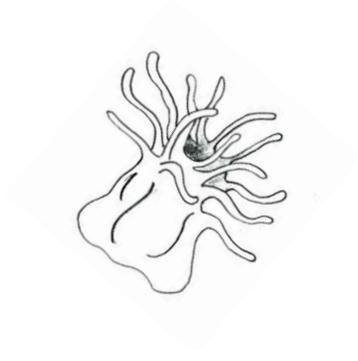
Children use marine picture cards to play a 'What am I?' game with each other, describing their characteristics while another or others have to guess which organism they are. Encourage open questions which give further information rather than questions with yes/no answers. Children use the information they have learned about characteristics of marine animals in order to write their own riddles for each other to solve.



Activity 5

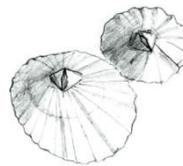
Think of an animal

This activity focuses children on the characteristics of different marine species. It can be done as a one off activity or carried out frequently in any spare five minutes for the duration of the topic. The animal sorting cards can be used for this activity.



Examples

- I am thinking of a crustacean, you have 5 questions to ask to find out which one.
- I am thinking of a marine animal. You have 20 questions to ask to find out which one.





Activity 2 Which group? vertebrates



Mammal - gives birth to live young, feeds their young on their own milk, have hair, warm blooded.

Bird - lays eggs, has feathers, warm blooded.

Fish - has scales, gills to breathe, cold blooded, lays eggs.

Amphibian - cold blooded, lives on land and water, many lay eggs, smooth moist skin.

Reptile - cold blooded, dry skin, lays eggs.

Sort the living things below into the correct group. Use your picture cards to help you if you need to.

mammal	bird	fish	amphibian	reptile

seal

adder

cod

red deer

frog

gannet

cuckoo wrasse

oystercatcher

otter

red squirrel

rabbit

shag

slow worm

swan

toad

Now add your own animals to each group





Activity 2a Which group? marine invertebrates



Molluscs – have a muscular foot and often have a protective shell or shells

Echinoderm – have spines and moves using tube feet with suckers. Most have a central body with five or more arms but some have no arms.

Crustaceans – have a hard exoskeleton and jointed legs.

Cnidarians – (silent 'c' pronounced ny-dairy-ans) have stinging tentacles which radiate out from its soft body.

Sort the living things below into the correct group. Use your marine life cards to help you.

mollusc	echinoderm	crustacean	cnydairian

sea cucumber sea anemone jellyfish lobster

mussel sea urchin limpet crab feather star

prawn periwinkle sun star barnacle

sandhopper clam octopus

Can you think of any land invertebrates?

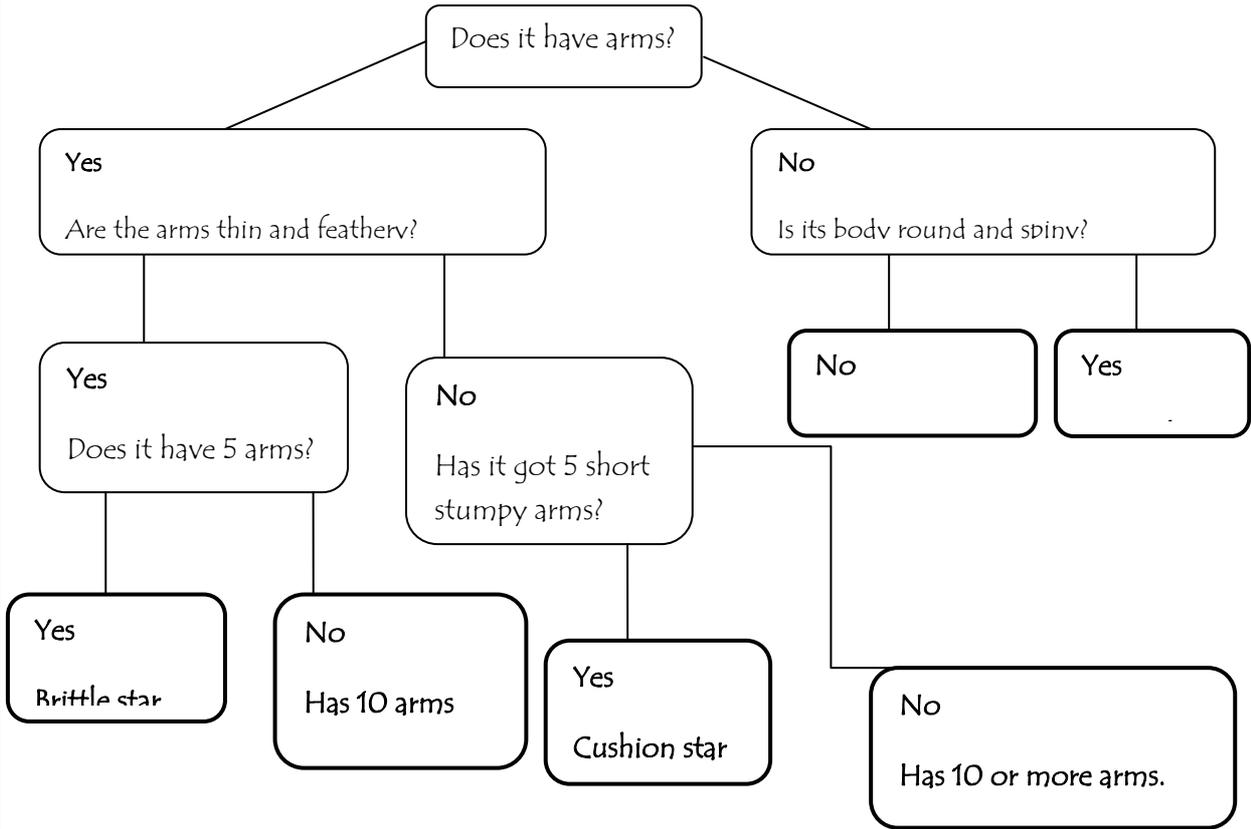


Activity 3 Classifying Echinoderms



All the different types of living things in 'The Bay' were named for you. Biologists use **keys** to help them identify and name plants and animals they find.

Starfish, sea cucumbers and sea urchins belong to a group of animals called **Echinoderms**. Echinoderms have soft bodies, spines and move using tube feet which have suckers. Below is a key that will help you to name the six echinoderms drawn below. Look at each animal in turn and follow the branches of the key until you arrive at its name. Write the name underneath the picture.



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End of Section Two