

INSPECTOR SHARKY MYSTERY - Key Stage 2 Science

OVERVIEW & CURRICULUM LINKS

This multi-activity workshop is based on food chains and predator-prey relationships and links directly with the KS2 Science Programme of Study. Children use a variety of skills while working scientifically to predict and draw conclusions and use microscopes. It is suitable for Years 3-6 and can also be delivered to older students working at KS2 levels.

LEARNING SESSION CONTENT

- **Input (10 minutes)**

The session begins with an introduction to the victims and the crime scene. Pupils are briefed on their part in Inspector Sharky's mission and shown a list of possible suspects.

- **Activities (20-25 minutes)**

Predator meets prey: Use our computer PowerPoint presentations to find out who's eating who. If you have time, watch video clips of these marine animals in the wild.**Small and smaller:** Use microscopes to observe our smallest shrimps and learn how they, and even smaller organisms, fit into a simple seafood chain!

Jaws! Get close to real shark's teeth to examine the adaptations that make them suitable for the prey they eat.

- **Plenary (5-10 minutes depending on time left)**

We put our evidence together on a large food web, and then follow the food chains through to pinpoint the two major suspects. Finally we use logic and reasoning to unmask the murderer!

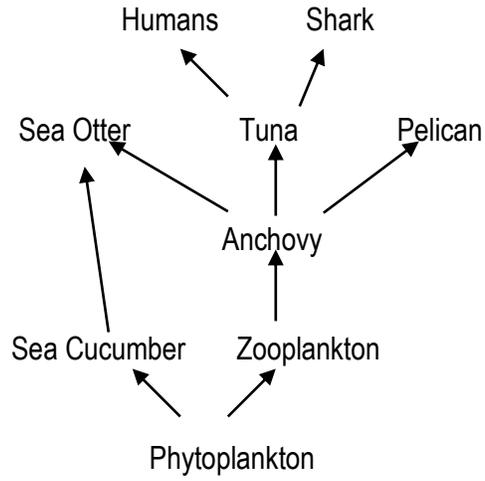
PRE-VISIT ACTIVITIES:

- Let pupils practice using magnifying glasses and, if available, microscopes. Look at small objects, plants or insects and make pencil drawings to show details we can't usually see.
- Explain the terms predator (an animal that kills other animals for its food) and prey (an animal that is killed as food for another animal). Make sure the children realise that some animals can be both predator and prey.
- You may wish to introduce pupils to the terms producer (a green plant that uses energy from the sun to make/produce its food) & consumer (an animal that eats/consumes other plants or animals).
- **FOLLOW-UP ACTIVITIES: What a Tangled Web We Lead**

These follow-up activities can be modified to suit the age and abilities of your class.

- **Find the food chain:** You will need examples of food webs, either marine or terrestrial, with enough species in total to include every child in the class. Every child needs a large piece of card and a length of tape or string to hang the card around their neck. On the front of each card the child writes the name of one of the organisms in the web and draws its picture; on the back, what it eats and gets eaten by. (Note that a plant does not eat anything as it makes its own food using the energy of the sun.) Starting with a green plant, help the children make as many different food chains as they can. Children can either hold hands, or can hold each end of arrow cards to show the direction of energy transfer ("Which way is the food going?")
- **Weaving the Web:** You will need a large space, a ball of thick string (to prevent friction burns and cuts from over-enthusiastic pulling) & the cards and children from one of the above food webs. Ask the players to form a circle. Hand the ball of string to the pupil bearing the green plant label. Ask, "Which hungry animal would like this food?" The 'plant' player keeps hold of the end of the string & passes the ball to the next player up in the food chain, who continues in the same way. The ball can also be passed down the food chain ("Which food will this animal eat?") as the string shows only the link between two organisms, not the direction of energy transfer. As the ball is passed around, the web takes shape, showing how all the species in a habitat are interdependent.
- **We All Need Each Other:** Weave a web as before, then introduce a problem. For example one species of fish is diseased, over-fished, or killed due to pollution. The player affected must give one tug on the string and sit down. Any player linked to them must do the same. Does this end with every species being affected? Do you get different results if different species are damaged to begin with? Point out that all living things are inter-related and anything that affects one species can have far reaching effects.

A food web for the Pacific Ocean off the coast of Peru



A food web for a coral reef in the Red Sea

