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opening extract from

Pocket Science: The Blue Book

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Internet links

Throughout this book we have recommended fun websites where you can find out more about science. To visit the sites, go to the **Usborne Quicklinks Website** where you will find links to all the sites.

1. Go to www.usborne-quicklinks.com
2. Type the keywords for this book: **pocket scientist 2**
3. Type the page number of the link you want to visit.
4. Click on the links to go to the sites.

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- Never give out information about yourself, such as your real name, address, phone number or the name of your school.
- If a site asks you to log in or register by typing your name or email address, ask permission from an adult first.

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COMPUTER NOT ESSENTIAL

If you don't have access to the Internet, don't worry. This book is a fun introduction to science on its own.

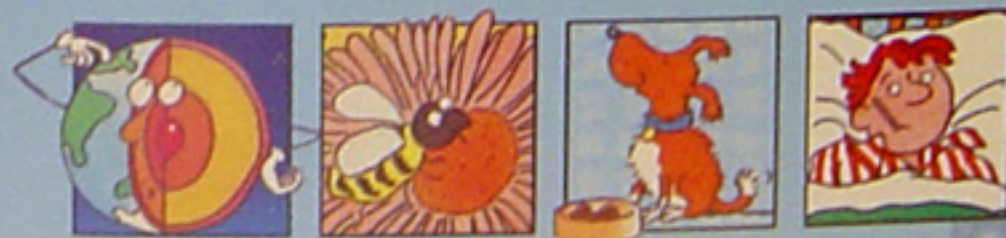
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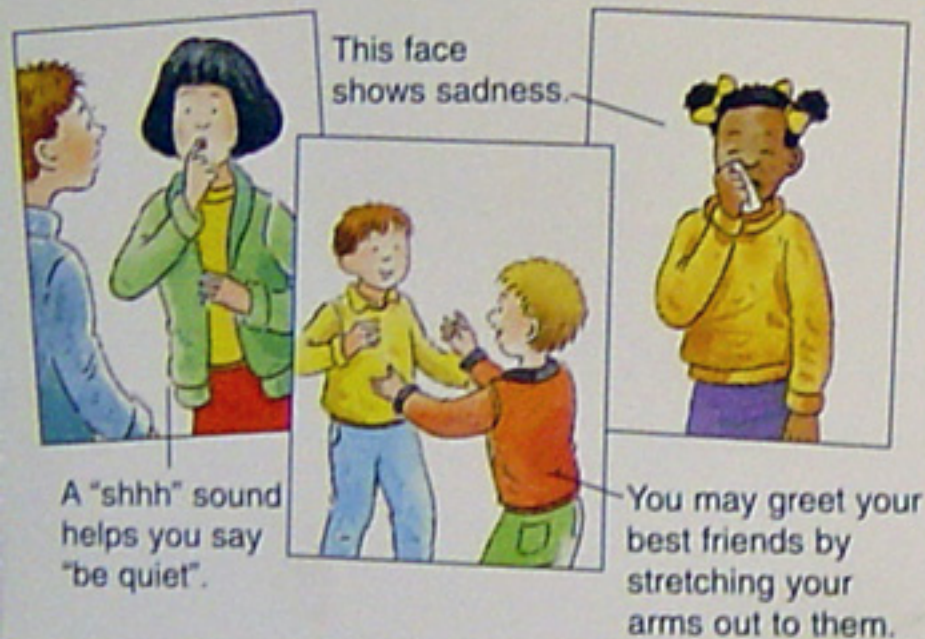
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Ways of talking

People talk to each other for all kinds of reasons. They talk using words, but they also say things in other ways. Different movements, sounds and faces all help you say what you mean.



Watching your pets

Animals say things to each other all the time. They don't use words, but they do "talk" in other ways, just as we do. Try watching your pets to see what they do.



You may see your dog bow to another dog like this. He is saying "play with me". He may do this to you too.



If your dog pokes another dog in the side with his nose, he is saying "stand still".



Life in the wild

In the wild, animals have to "talk" to each other so that they can survive and bring up their families. For example, this is important for the cat's wild relative, the lion.

A lioness's special scent tells males when she is ready to mate.

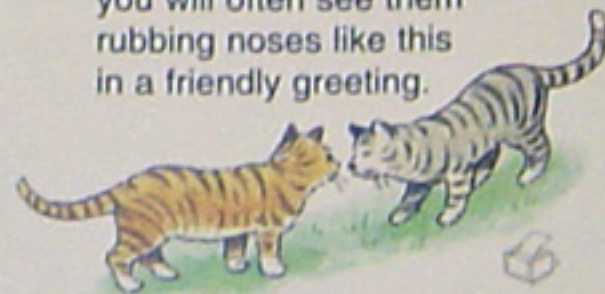


The parents and their babies must understand each other so the family can stay safely together.

Lionesses teach their cubs to hunt and to protect themselves.



If you have pet cats you will often see them rubbing noses like this in a friendly greeting.



Animals "talk" to each other with many movements, sounds and smells. Some have special colours and patterns.

These all make clear messages which are full of important information for family, friends and even enemies.

Saying "keep out"

The place where an animal finds food, water and a mate is very important. The animal guards part of it, to keep away others of its own kind.

The area the animal guards is called its territory. Territory owners must make clear warnings which tell others "keep out, I live here".

Making a noise

Many animals make sounds to warn others "this is my territory". Noises are a good warning because they travel a long way.

Birds such as gulls make a simple call which says "this is mine". Other birds, such as thrushes, sing more complicated songs.

Each kind of bird has a different song. Usually, the male sings it. He learns it by listening to the adult males when he is young.

When the bird is ready to guard territory of his own, he adds new bits to his song. This makes a stronger "keep out" signal.

This thrush recognizes his neighbour's song and will keep out of his territory.

A bird's song is usually meant for birds of his own kind. This thrush is singing to warn other thrushes nearby.



Rat-a-tat-tat

A male woodpecker marks his territory with a loud rat-a-tat-tat. He makes the sound by drumming his beak on a hollow branch or tree.



The woodpecker in this picture makes about 25 drums a second. When he is feeding he only makes a short tap-tap.

The lion's roar

Lions live in groups called prides. A pride's territory can be up to twenty kilometres across.

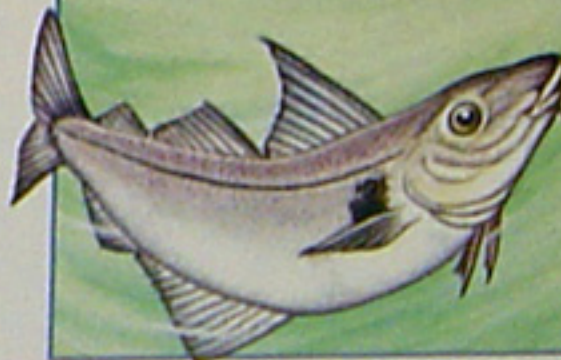


An adult male warns other males away with an almighty roar. It can be heard eight kilometres away.



Noises underwater

The male haddock guards his underwater territory by making noises. He moves special muscles so they drum against a part called his swim bladder.



If a haddock is very angry with another male, the drumming becomes so quick it sounds like a loud hum.

