



How do you make contact? Looking at the Earth

time

55 minutes.

learning outcomes

To:

- learn that you need something to help you make contact over a long distance
- learn that there are different ways to communicate with each other

materials needed

- photograph of parrot (Appendix)
- 24 tin cans
- 3 torches
- string
- nail
- hammer
- optional: prize for the competition

Preparation

For the activity **Contact!** use the hammer and nail to make a hole in the bottom of each tin can. Join the tins together in 12 pairs using the string. Make sure that each tin-can telephone has a different length of string.

Set up a room divider in one corner of the classroom and put a chair on each side of this wall, so that the children cannot see each other during the activity.

You will need the photograph of the parrot from the Appendix.



Can you still hear me? 15 min.

Take the children outside to the playground. Ask the children to stand facing each other in pairs and encourage them to talk to each other. One child from each pair (always the same child) moves backwards one step at a time. The children stop when they can no longer understand what the other child is saying. See how far apart they are. Explain that this is quite a distance, but not very far.

Go back inside and sit in a circle with the children. Discuss the results. Could they stand further apart if they shouted to each other? Did they think it was a long distance or not? How can you talk to your mother at home if you are in the school playground? Shouting is not loud enough. Come to the conclusion that you cannot communicate very far without something to help you.



The children investigate different ways to make contact with each other.



Contact! 30 min.

Organise the children into pairs. Explain the activities before you start.

Hello. Who's there?

Each pair of children takes one of the pre-prepared tin-can telephones. Ask them to talk to each other by speaking into the tin can. Explain that they must keep the string taut. Can they understand each other if they whisper? Encourage the pairs of children to swap telephones to find out if they can still understand each other if the string is longer or shorter.



Parrots

Organise the class into two groups. Each group stands on the opposite side of a movable room divider. One child from each group sits on a chair. Ask one other child to stand by the room divider to pass on the signal (a facial expression or a code of flashes). Explain to the class that this child is the parrot. He or she is the only one who can see both groups of children at once. Ask the children if they know what a parrot is. Show the photograph of the parrot from the Appendix. Explain that a parrot is good at repeating what it hears. Give the parrot and the two seated children a torch. One of the seated children begins. This child is the transmitter. Explain that a transmitter sends a signal. You can send a picture as an image (a facial expression) or in code (using a flashing light). The transmitter flashes the torch a number of times, or shows a facial expression to the parrot. The parrot passes this on to the child on the other side of the room divider; this is the receiver. The group on the receiver side counts how many times the parrot flashed his torch, or copies the facial expression of the parrot. Let the group take it in turns to be transmitter and receiver.

Tip.

Turn it into a competition with a prize.



Sit in a circle with the children and discuss both activities. Explain that using the tin cans means you don't have to talk very loudly to hear each other over a long distance.

What did the children learn during the *Parrot* activity? Was it difficult to guess what the other group did? Would they have been able to guess without the parrot? Explain that using a 'parrot' enables you to communicate over longer distances without using a string like the one in the tin-can telephone.



Is a satellite a handy invention? 10 min.

Summarise the conclusions from the activities. You need something to help you if you want to talk with other people over a longer distance. A piece of string on its own is not enough. A fixed-line telephone works rather like the tin cans, except that the string is a cable buried in the ground.

The parrot method was used frequently long ago. Then you had a messenger.

The king in one country told something to the messenger and he had to give the message to the king in the other country. The only trouble was it could take weeks for the message to arrive. Nowadays you can talk to people all over the world via a satellite. A satellite is also a sort of parrot. It hangs in space and picks up messages and sends them on to someone somewhere else in the world. This enables you to talk to someone who is a long way away, for example on the other side of the ocean, or high in the mountains.

