

SOUND

YEAR 3

SPRING 1



LESSON 6

What are some uses of sound?



Do Now – Retrieval

1. Fill in the sentence below:

To make somewhere as quiet as possible, it is best to use hard/soft materials.

2. Fill in the sentence below:

To make somewhere as quiet as possible, it is best to use hard/soft materials.

3. Match up the different examples with the job of the scientist

Example	Job of the scientist
Recording studio -	- Make the best quality sound possible
Concert hall -	- To block out sound from outside the room
Sports stadium -	- To make sound be heard from a long way away
Headphones and speakers -	- To make the sound as loud as possible

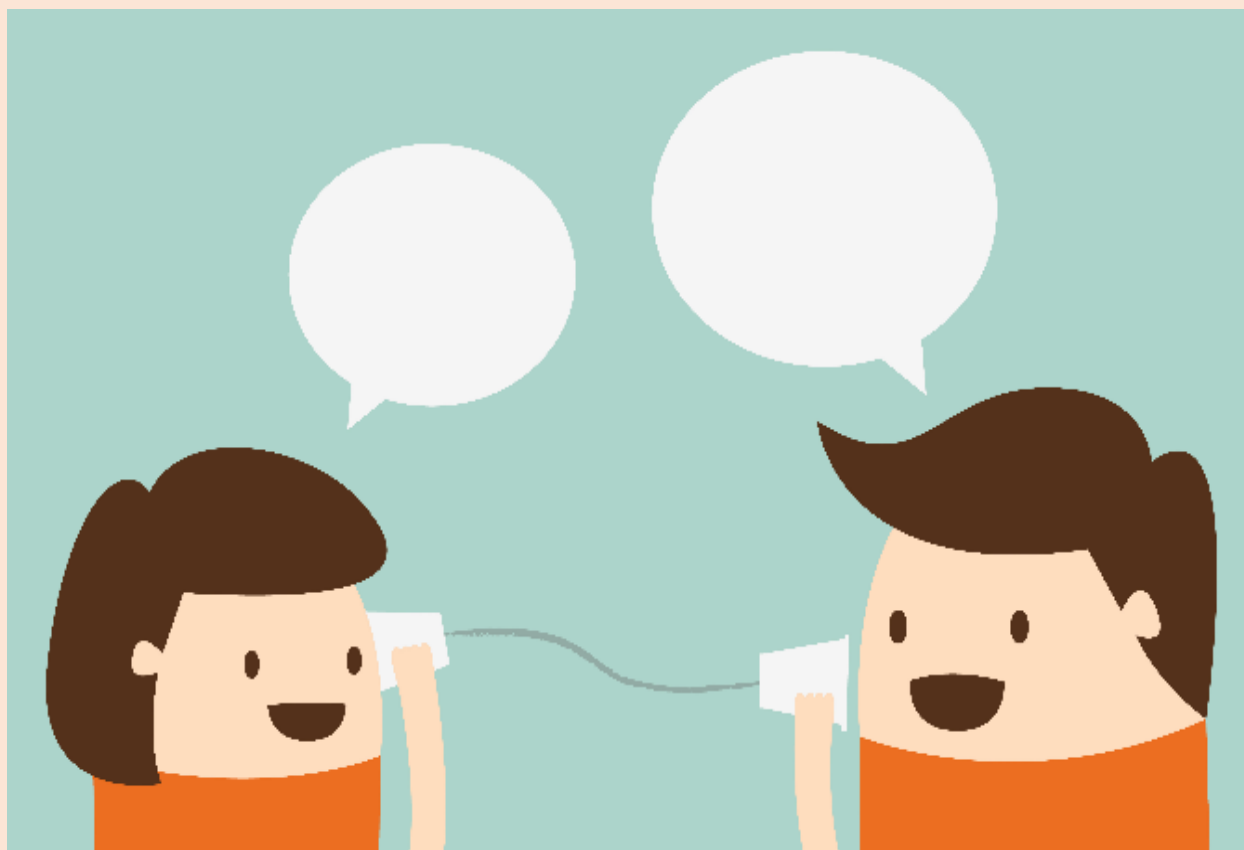
From previous topic:

4. What is recycling?

Recycling is a process of c_____ and re_____ materials to make new synthetic materials.

5. Why do we want to avoid using raw materials too much?

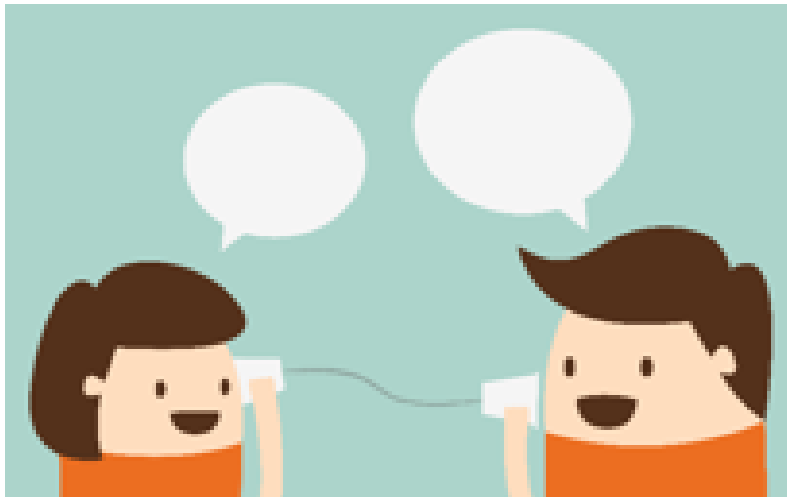
Eventually, raw materials will be u_____ u_____ and they cannot be replaced.





Read the following about string telephones

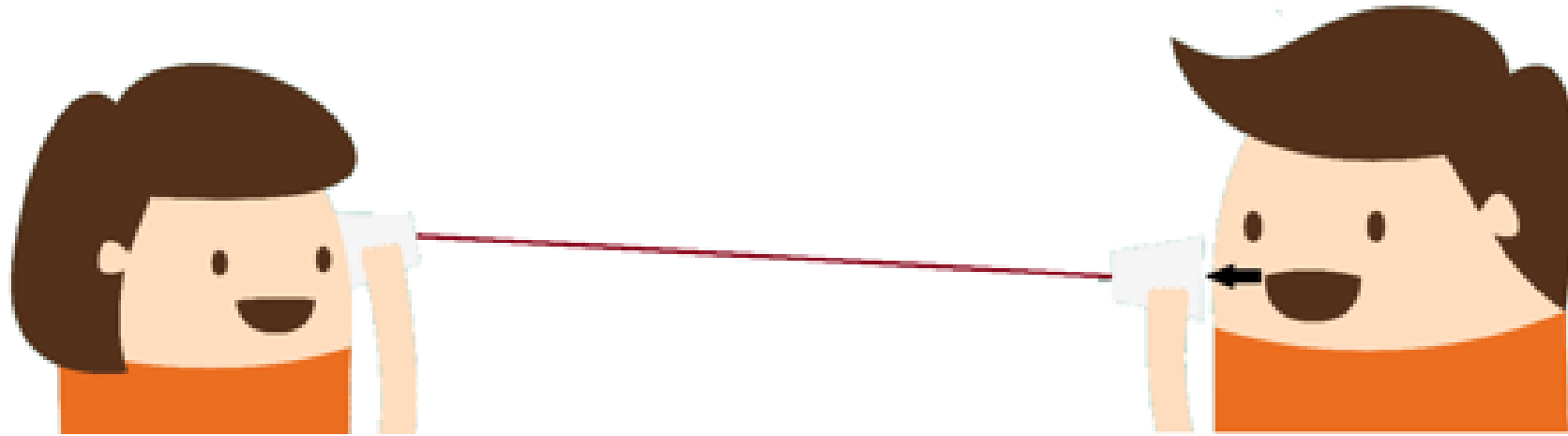
There are a range of applications that show us how sound can be useful. One simple way of seeing this is using a string telephone.



By connecting two cups with a string, you can speak through one cup and hear what is being said across a distance in the other cup. When the first person speaks into the first cup, their voice makes the cup vibrate. These vibrations make the string vibrate. As the string vibrates, the second cup is made to vibrate. These vibrations can be heard by the person with the second cup. This means they can hear what is being said by the first person.



Add arrows to the diagram below to show how sound travels from one person's mouth to the ear of another person



It is very important that the **string is pulled taut**. This means that it is being pulled apart so that it is in a firm,

straight line. If you do not do this, the string is too relaxed and the vibrations will not pass along the string.



Put the following steps in order to show how sound passes along string phone cups

_____ - the vibrations pass along the string from the first cup to the second one

_____ - the sound of the second cup vibrating passes to the second person's ear

_____ - their voice makes the first cup vibrate

1_____ - Sound from one person's mouth travels to the first cup

_____ - the second cup vibrates



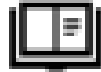
Follow the instructions below to make your own string telephone

Equipment:

- Two paper cups
- Two paper clips
- A piece of string
- A sharp pencil

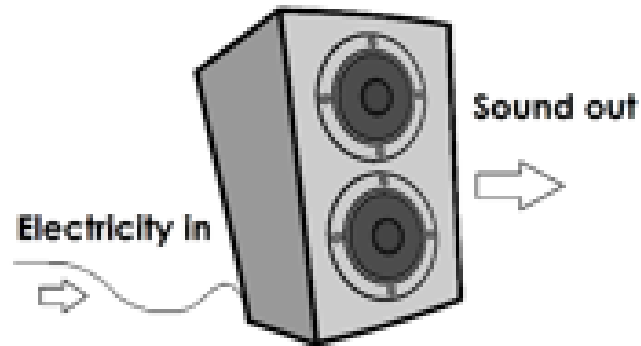
Method:

- 1) Carefully make a small hole in the bottom of each cup using the pencil (the teacher may need to do this for you)
- 2) Pass one end of the string up through the bottom of the first cup
- 3) Pass the other end of the string up through the bottom of the second cup
- 4) Tie each end of the string onto a paper clip
- 5) Pull the cups apart so that the string is taught
- 6) Try having a conversation from a distance with a partner over a distance!



Read the following passage about loudspeakers and microphones

We can use certain devices to record sound and to create sound electronically. A loud speaker is an object that changes electricity in wires into sound in the air.



Loud speakers are used in head phones, phones, televisions and computers for example. Anything that is powered by electricity and creates sound will use a loud speaker.

A microphone is an object that detects sound and changes it into an electrical signal.



Microphones are used to detect sound in phones, computers, intercoms in flats and in video cameras for examples. Anytime sound needs to be detected, a microphone will be used.



Give two examples of where loud speakers are used and two examples of where microphones are used:

Loudspeakers are used in:

1) _____

2) _____

Microphones are used in:

1) _____

2) _____

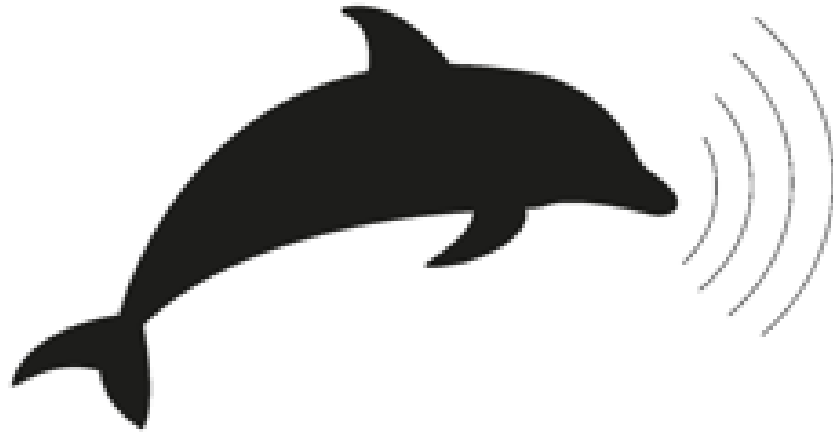


Watch this video on echo location

(<https://www.youtube.com/watch?v=5GuaNA-5qWw>)



Finish the diagrams below to show how dolphins use echolocation to see the rocky wall in front of them



Discuss how submarines might be able to use echolocation to see under water in the dark



Return to page 4 to complete the learning review