# War I Primary Resources: Lesson 6

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| Subject: Science |
| Curriculum linksSee curriculum links from England, Wales, Northern Ireland and Scotland |
| Cross curricular opportunities: History |
| Year Group/Class: |
| Date of lesson:  |
| Learning objectives |
| * Recognise that vibrations from sound travel through a medium to the ear.
* Explain how sound vibrations can be carried.
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| Success Criteria |
| * Identify some scientific principles related to the First World War and describe their relevance and operation in today’s world.
* Appreciate some of the long term effects of conflict – injury and impairment – and the impact they might have on someone’s life.
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| Key vocabulary |
| * Sound
* Voice box
* Vibrations
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| Resources |
| * White board / lap top
* Operation Ouch WWI film section 22:21 -27:00
* Drum, recorder, sand paper, wood block, loudspeaker, Balloons, blind fold.
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| SEQUENCE OF LESSON – (based on 40 minute lesson) |
| Timings15 minutes­ | IntroductionAsk the children to come and sit in a circle. Ask them how they heard your instruction? Where did the sound start?The vibration made by a voice box vibrates tiny invisible particles in the air causing the sound vibration to cross through the air and vibrate in their ear drums. Blindfold a volunteer* Class stand in a ring around the volunteer.
* Children take turns to make gentle noises, such as a clap of the hands, a click of the fingers or a quiet call.
* After each sound, the person with the blindfold should point to where they think the sound is coming from.

Sound doesn’t just travel through air, but through other materials too.Sound is a form of energy. For sound to be produced vibrations must be set up by a source. Ask the pupils to work in small groups to experiment with sound; by hitting (drum), blowing (recorder), stroking (sand paper on wood) and if possible electrical (loudspeaker).Discuss with the class:The vibrations travel through a solid, liquid, or gas and reach our ears where it can be heard. If the vibrations have a lot of energy then they are loud. If they have little energy then the sound is quiet. Sometimes the vibrations can be seen or felt on the skin. |
| 25 minutes  | Group or class activities In groups of two, experiment using a balloon to hear and feel sound vibration.* Get the children to blow up balloon
* Then hold it against their ear
* Then ask their partner to press their lips against balloon and speak
* Switch over so both children have a go.

Whole group – talk about how you can hear and feel the vibrations through the balloon. Sound is created when an object moves and the air around it vibrates creating sound waves.Show the section of the CBBC Operation ouch film 22:21 – 27:13If the sound travels as vibrations in the air at high levels it can cause damage to the delicate mechanisms in the ear which is what Dr Chris & Dr Xand are talking about in the film.Many of the WWI soldiers went home with damaged hearing when the war finished.  |
| Time available | Plenary Ask pupils what they have learnt from this lesson* Think of some sounds (whispering, fireworks, car alarms, insect buzz, electric drill, ukulele playing, vacuum cleaner...) and put them in order of loudness.
* How did it feel to be blindfolded? How would it feel to be unable to hear instructions? How much do we rely on our senses and how would it feel for one of those senses to be impaired? What would change about your everyday life? What wouldn’t change? How would you want other people to treat you?

Extension ActivityDr Chris at the end of the section in the film talks about how although we have learnt a lot since WWI, explosions are still a part of modern conflicts and are still in the news today.Go to British Red Cross Website and download or show them the picture of the mystery object <http://www.redcross.org.uk/What-we-do/Teaching-resources/Quick-activities/Mystery-object>Land mines have changed in the last 100 years – they are not big and clumpy anymore, they are often coloured green so they can blend into the background. Explain that the photograph is a picture of a butterfly mine ask whether they think a child would pick it up if they saw it lying in the street or in a bush?In countries where mines have been left scattered around, children often don’t realise the danger and play frisbee with them. If you pick them up by the thin wing and throw them, nothing happens. However, if you apply pressure on the other end (the fat wing), the device will explode, causing terrible injuries. Ask children to design a poster warning of the dangers of landmines |
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| Opportunities for Assessment  | Differentiation |
| * Speaking & Listening
* Observations
 | * Task
* Outcome
* Questioning
 |
| Evaluation |  |
| What worked really well in my lesson?What do I want to focus on to improve future lessons? |