

**Water, Sound Waves and the Sea**

You might be aware that sound waves move faster through water than through the air and can also travel for longer distances.

Listening to underwater sounds, called *hydroacoustic monitoring* has enabled scientists to measure things such as environmental changes and record earthquakes and the movement of magma through the sea floor during major eruptions. They have also been able to pick up low frequency calls of large whales. The study of sound and its behaviour in the sea is called *ocean acoustics*.

There are many fascinating sites on the internet if you would like to find out more, some detail the work that has been carried out and explain the findings in much greater detail. One site you can visit is **oceanexplorer.noaa.gov**

There are many YouTube clips that you might like to view at your leisure, showing the effects of sound waves on water.

You may remember completing a sound wave experiment at school? A glass bowl is covered with plastic wrap (cling film) and a teaspoon of uncooked rice is placed on top. You then hold a metal baking tray next to the bowl and with a metal spoon, bang on the tray like a drum and watch how the rice behaves.

This demonstrates that sound is a disturbance and can travel through a medium as a wave. Sound waves can travel through any substance including gas (air – as in the above demonstration), liquid (water) and solids (the sea floor). The human ear has evolved to hear air therefore for us, sounds that we hear clearly in the air will sound muffled underwater.

If you aren’t able to visit the coast but would like to listen to some of the sounds of the sea, you can visit **dosits.org** and listen to some common underwater sounds to help you relax, or imagine that you have been transported to the seaside. 