

Whisper dishes



Location

Ground floor, Move it exhibition

In a nutshell

See how your whispers can travel and be understood over great distances using our special dishes.

What to do

One person stands at each dish and if one whispers into the loop towards the dish the other person will be able to clearly hear them. A whispered conversation can occur using the dishes. Try standing between the two dishes when other people are using them. You should be able to listen in on their conversation!

Time Required

KS3 & KS4 2 minutes per student.

What's happening?

Usually when we speak the sound spreads out in all directions. The concave shape of the dish focuses and directs your whisper towards the other dish. Your message bounces off the other dish, focusing the sound in front of your friend, so they can hear it easily. Whisper dishes or parabolic acoustic mirrors were used prior to World War II and the invention of radar on the coasts of Great Britain. They were used to detect incoming enemy aircraft by the sound of their engines.

Curriculum links

Curriculum links	
KS3	<p>Science - Sound waves</p> <ul style="list-style-type: none"> - frequencies of sound waves, measured in hertz (Hz); echoes, reflection and absorption of sound - sound needs a medium to travel, the speed of sound in air, in water, in solids <p>History</p> <ul style="list-style-type: none"> - challenges for Britain, Europe and the wider world 1901 to the present day
KS4	<p>Science - Waves in air, fluids and solids</p> <ul style="list-style-type: none"> - describe how ripples on water surfaces are examples of transverse waves whilst sound waves in air are longitudinal waves, and how the speed of each may be measured; describe evidence that in both cases it is the wave and not the water or air itself that travels <p>Science - Waves at material interfaces: applications in exploring structures (single)</p> <ul style="list-style-type: none"> - describe the effects of reflection, transmission, and absorption of waves at material interfaces <p>History:</p> <ul style="list-style-type: none"> - Modern (1700-present day) - a locality (the historic environment); British; and European and / or wider world settings

Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none"> • A trick of the light (KS3 & KS4) 	<ul style="list-style-type: none"> • Boggling brains (KS3 & KS4) 		<ul style="list-style-type: none"> • Seeing sounds • Hearing range • Sound bite • Vocal vowels

