

the outdoor classroom

sound mapping

Curriculum Focus: Music, Science

Keywords: Rivers, Music, Sounds, Maps, Sound Mapping, Musical Elements, Vibration and Resonance, Map Reading

Skills learnt in this worksheet include:

- Listening
- Collecting and recording evidence
- Classifying, representing and interpreting data
- Undertaking field work
- Group work / individual work
- Learning technical language related to music
- Using musical themes to define a topic
- Learning about sounds in different environments
- Vibration and resonance (cross curricular links with science)
- Musical composition (Optional)

Resources needed:

- Map of Mereway Nature Park and/or Kneller Gardens or Crane Park
- Summary sheet
- Musical instruments (optional - not needed on site)
- Recording of The Moldau from Ma Vlast by Bedrich Smetana (optional)

Additional resources:

DEFRA has a noise mapping website which includes frequently asked questions about noise, noise pollution and noise maps.

www.services.defra.gov.uk/wps/portal/noise

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Ideas for activities on site:

Creating and using a sound map

- 1. Use a map of the local area to see where you are.**
 - Stop at different locations of your choice and listen carefully for different sounds.
 - Make notes or draw pictures of these sounds on the map in the place where you heard them. If you need more space use a summary sheet.

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Some examples of the sounds you might listen out for are:

Natural sounds:	birds insects water rushing over the weir river sounds grasses, bushes and trees moving in the wind your footsteps on different surfaces
Man-made sounds:	aircraft traffic trains bicycles glass being emptied in the depot weir tilting people talking

On the data sheet make a note of any musical elements of each sound:

- Does the sound have a tune (melody)?
- Is it long or short (duration)?
- High or low (pitch)?
- Loud or quiet (dynamics)?
- Or does it have a pulse (like your heartbeat)?
- Or a pattern (rhythm) or a repeated pattern (ostinato)?

2. Now choose a favourite place on the sound map.

- Try reproducing some of the sounds you heard using your voice and body percussion.
- Try doing this in a group and see if other people can guess what the sounds are, and where you are on the map.

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3. Next, try making some of your own sounds in different places on the map and see what differences there are.
 - Choose a simple sound such as clapping your hands, or singing a few notes.
 - Try making the sound in an open grassy area and in an enclosed wooded area. Does it sound different?
 - Working in pairs or groups, walk away from each other and see how far away you can hear one person making a sound in different locations.

4. Discuss what the terms vibration and resonance mean.
 - Can you find somewhere in the park where there is an echo?
 - If you are working in Mereway Nature Park, try going into the tunnel under the railway line and test out the echo.
 - Make the same sound inside and outside the tunnel and listen for the difference.

Suggested activities in the classroom:

Use the sound map as the basis for a composition to describe your walk around Mereway and Kneller Gardens or Crane Park, or to describe a specific place on your walk, such as the riverbank.

- Try to match instruments to the sounds you marked on the map.
- Work in groups using sets of different instruments and discuss which instrument would make each sound most effectively.

Suggested instruments to use: xylophone, glockenspiel or chime bars
rainstick
claves or woodblock
maraca
cabassa
tambourine
hand drum
bell or triangle