

## Activity: Sound and distance

### National Curriculum Links:

#### Working scientifically

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- using results to draw simple conclusions, make predictions for new values identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

#### Sound

- identify how sounds are made, associating some of them with something vibrating
- recognise that vibrations from sounds travel through a medium to the ear
- recognise that sounds get fainter as the distance from the sound source increases.

**Suggested Park location** – any area with access to railings, benches, trees, paving - Winter Garden near Sun Gate

### What do we need?

Medium sized objects to make sounds with e.g stick, stone, metal pan/tool, cardboard tube

Record sheet

Decibel app on phones/tablets

Long tape measures/ measuring wheel

Paper and pencils to record investigation

Apps/ phones to take pictures



### What do we do?

- Explain that they are going to investigate if sound gets quieter with distance.
  - Can they see any object they could use to produce sounds when they hit it? (railings, tree trunk, paving, lamp post, bench)
  - Which object do they think will make the loudest/quietest sound? Why?
- Each group to choose the object they plan to use.
- Groups then need to consider:
  - What is their hypothesis going to be?
  - How will they investigate it?
  - What sound will they create?
  - How will they keep the test fair?
  - What will they measure and record?
  - How will they record their results including different volume levels?
- Pupils carry out their investigation, recording their results.
- Discuss what their results show – what conclusions can they draw from their investigations?

