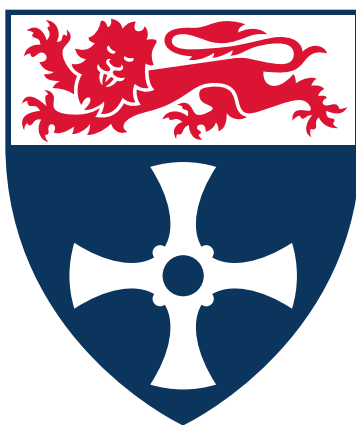


1 hr 30 min

Suitable for:
KS3+

Newcastle University

School of Maths, Stats, and Physics



DIY Slapaphone

This activity works well alongside:

[Membrane Flute, Balloon Oscilloscope](#)

Build a musical instrument in groups from PVC piping, and learn to play it. This is a very flexible duration.

Prerequisites

Before starting this activity, participants should be familiar with:

- Waves. Standing waves will be recapped.

Date→									
Equipment	Per Set	Out	In	Out	In	Out	In	Out	In
32mm PVC piping	<i>see below</i>								
Large stand	1								
Sticky labels	1								
Marker pens	1								

Each group (3-4 groups total), will need a set of PVC piping of 32mm diameter, cut to the following lengths:

Note	Frequency (Hz)	Length (mm)
C ₄	261.63	672
C ₄ [#] , D ₄ ^b	277.18	635
D ₄	293.66	600
D ₄ [#] , E ₄ ^b	311.13	567
E ₄	329.63	536
F ₄	349.23	507
F ₄ [#] , G ₄ ^b	369.99	480
G ₄	392.00	454
G ₄ [#] , A ₄ ^b	415.30	429
A ₄	440.00	406
A ₄ [#] , B ₄ ^b	466.16	384
B ₄	493.88	363
C ₅	523.25	344
C ₅ [#] , D ₅ ^b	554.37	325
D ₅	587.33	308
D ₅ [#] , E ₅ ^b	622.25	292
E ₅	659.25	276
F ₅	698.46	262
F ₅ [#] , G ₅ ^b	739.99	248
G ₅	783.99	235
G ₅ [#] , A ₅ ^b	830.61	222
A ₅	880.00	211
A ₅ [#] , B ₅ ^b	932.33	200
B ₅	987.77	190
C ₆	1046.50	180