



## From Serpents to Synthesisers: the physics of musical instruments

By Professor Murray Campbell

Music plays an important role in most people's lives, but only recently have many aspects of the operation of musical instruments been studied scientifically. This lecture introduces the nature of musical sound and demonstrates a fascinating array of instruments old and new, including orchestral stalwarts like the violin and trumpet, curiosities such as the rackett and the serpent, and the ubiquitous synthesiser. Throughout, the emphasis is on the underlying physical principles and the ways in which they determine the musical behaviour.

The talk is liberally illustrated by many scientific and musical demonstrations and can be tailored to all age ranges.

Murray Campbell is Professor of Musical Acoustics at the University of Edinburgh.

### Curriculum Links

- 5-14 Science: Energy and Forces
- Advanced Higher Physics: Wave Phenomena

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