A colorful musical notes on a black background

Description automatically generated

A blue plastic pipe structure

Description automatically generated

A drawing of a violin

Description automatically generated

What does this toy have to do with music?

Warning!!!- Pinch hazard

Turn over to discover more…

This is **The Nucleation Game!!!**

Start the timer and begin connecting the pieces to mimic the structure.

The music will follow you step by step and stop when you complete the structure!

*Crystals are classed according to the symmetry*

*that relates one molecule or atom to the others.*

*In other words, the arrangement of matter can be thought of as a motif that repeats throughout the crystal, much like the bars that give a regularity to patterns of notes,*

*and the symmetry of crystals is like the time signature that give different pieces a characteristic feel.*

How do you feel about the music for the whole process?? What about compare the beginning with the end? Can you feel the music changes every time when you add more pieces?

*Does the melody of the music become more coherent?*

*Or does it become smoother?*

Listen to the music when someone else plays the Nucleation Game.

*How is it different?*

Both musical structure and your construction process can be reflected by a map!

*The demonstrators will discuss more about this!!*

Did you know?

There are crystals all around us, from metals and rocks to plastics and plants, even your teeth and bones and parts of insects are made from crystals!

The pieces of this crystal are about 109 × (a thousand million times) larger than the atoms and molecules that make up crystals around us, such as table salt, sugar and quartz.

A qr code with a few black squares

Description automatically generated

Research at the University of Birmingham is investigating the nucleation of materials known as ‘metal-organic frameworks’, which are a bit like the toy you have made. Scan the QR code to find out more!

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