

What music is there in your life?



Take a moment, jot down your thoughts about music. *First*, think about the music in your earbud - what music do you like and why? *Second*, where else do you hear music?



What makes all of these sounds something you call music?

Are they both music? What is similar and what is different?



Everyone likes different kinds of music - let's check out these two videos to start our discussion.



What do you notice and wonder?



What do you notice about the music and sounds as you watch and listen?



What questions do you have about music and sounds and how they fit together?

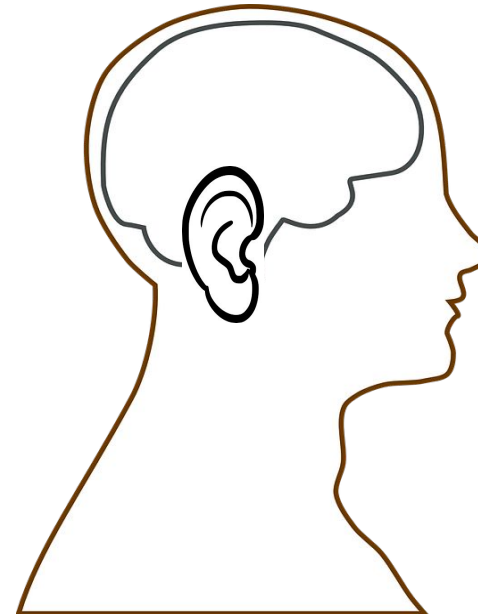


What science ideas can you use to start thinking about this question - what is music?

How does music “get in our heads”?



What parts of a song make it to your ear that cause you to think about certain songs and sing them over and over? Use this space to develop your initial explanation. *Remember, this is a rough draft and it's for you - to make a record of your thinking right now.*



When *listening* to music what are we *thinking* about?



Now that we're looking deeper, and thinking imaginatively, and have a new concept to work with - the *mere exposure effect* - let's start making sense of rhythm.

What evidence did researchers provide to support their claim about the importance of repetition?

Explain how the *mere-exposure effect* has recently played a role in your life. Use at least two examples to support your thinking...

Making sense of a graph to identify science relationships



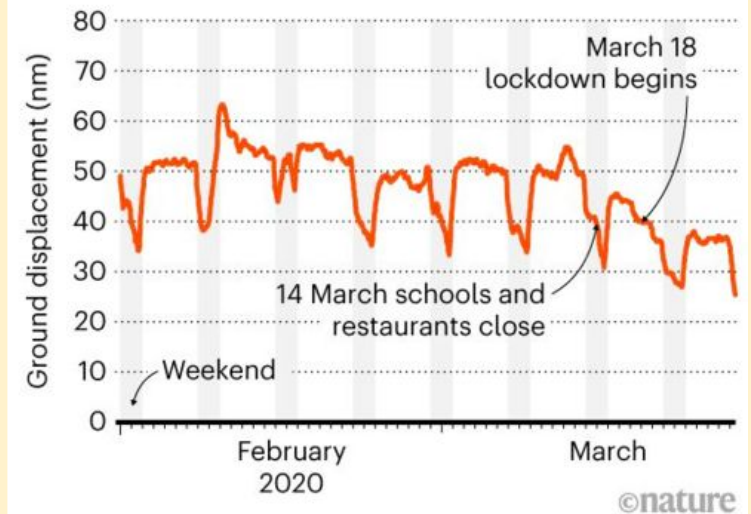
Can we use the information in the graph to identify a connection between activity and sound? What causes some of the changes in the pattern - and not just what the graph text tells us - what causes the changes in the red line?

If you were a random point at any one place on the line what would the city sound like? What would it feel like?

Identify three points on the graph where you feel like the sounds or vibrations are different in the city. Explain what is happening at each point that results in this difference.

SEISMIC NOISE

In Belgium, vibrations caused by human activity have fallen by about one-third since coronavirus containment measures were introduced.



How can we describe vibrations & their causes?



What do you notice about the frog & what is happening in the water?



How can vibrations be caused by a frog, playing a guitar, stomping on the ground, AND tapping glass?



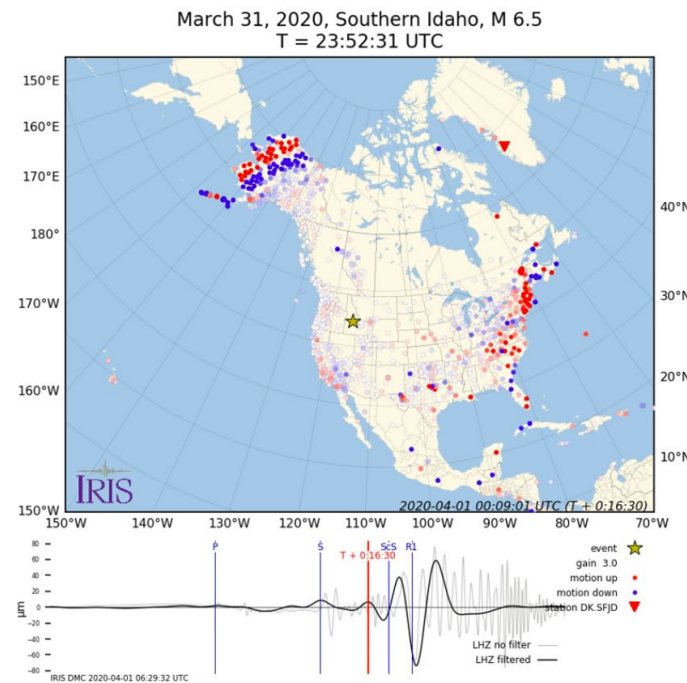
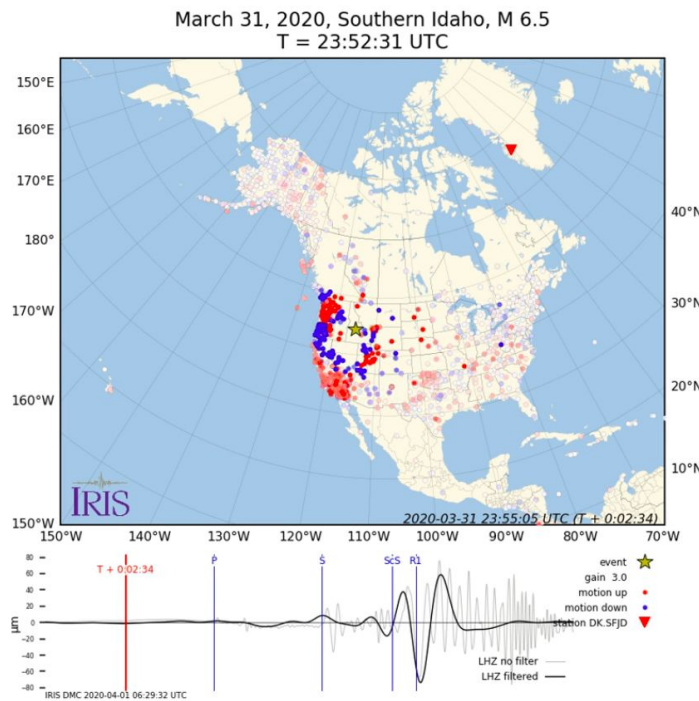
What relationships between events or patterns can be observed in these situations? For example, what starts it? Stops it? Keeps it going...?

Making sense of a graph to identify science relationships

A magnitude 6.5 earthquake occurred 72 km (44.7 miles) west of Challis, Idaho at a depth of 10 km (6.2 miles). This earthquake was widely felt across multiple states. There are no reports of damage or injuries



How can there be a magnitude 6.5 earthquake that is felt across **multiple** states and no damage or injuries?



The map on the left shows the the time after the earthquake occurred to be **+T 0:02:34** while the map on the right at **+T 0:16:30**. How might you explain the differences you see in these two maps? What evidence can you use from each?

What is up with the graph at the bottom? What is that line describing?

Why does it look like a sound wave?!?

Extending our thinking - how could we explain this?



New headphones keep coming out advertising that they are *bone conducting*. Look at the pictures on the right - they do not even go in the ear! Using what we have started to figure out - how might we begin to explain how these work?!?



Share your thinking with another person – what questions can you help each other understand?
What new questions do you have?