

# Northern Resonance

## Teacher Resource Guide Lotus Blossoms 2024



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## About Northern Resonance

Northern Resonance is a Scandinavian string trio, composed of highly skilled musicians Jerker Hans-Ers (hardanger fiddle), Anna Ekborg Hans-Ers (viola d'amore), and Petrus Dillner (nyckelharpa). Formed in 2017, this group pioneers a unique fusion of newly composed folk music with expansive soundscapes, utilizing the distinctive blend of their three instruments. Using their knowledge of traditional nordic folk music, Northern Resonance writes new compositions inspired by everyday life. Their goal is to connect people by creating music that is relatable to anyone, regardless of what language they speak.<sup>1</sup>

## Instruments

### Viola d'amore [vio:la da'mo:re]

The viola d'amore (Italian for “viola of love”) is a tenor string instrument in the violin family. This instrument usually has 6 or 7 primary strings, with the same amount of sympathetic strings. It is played by drawing a bow across the primary strings, and is held under the chin similar to a violin. Thanks to the additional sympathetic strings, the viola d'amore is said to have a particularly sweet and warm sound.



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<sup>1</sup> <https://www.northernresonance.se/about>

## Hardanger Fiddle

The Hardanger fiddle is considered the national instrument of Norway. Unlike a



violin that has four strings, the hardanger fiddle has eight or nine strings. Four main strings are on top, with four or five metal sympathetic strings that run below the fingerboard. Despite being slightly smaller than the concert violin, it is played with a bow in a similar manner.<sup>2</sup> When the four top strings are played, the bottom strings vibrate as well, creating a unique resonant, echo-like tone. This instrument is often highly decorated with mother of pearl on the fingerboard and black ink decorations called “rosing” on the body.

## Nyckelharpa [ NICK-el-HAR-pa]

The nyckelharpa or “key fiddle” is a traditional Swedish instrument that is over 600 years old. The nyckelharpa boasts 16 strings, including melody, drone, and sympathetic vibration strings. It is played by running a short bow over the top strings with the right hand, while pressing wooden keys with the left hand. The keys sit below the top strings, and use small pegs to press sideways on the strings to create different notes. The



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<sup>2</sup> <https://www.britannica.com/art/Hardanger-fiddle>

keys offer this instrument a 3-octave range and produce a resonant sound akin to a fiddle but with more depth.<sup>3</sup> Unlike a fiddle which is held under the chin, the nyckelharpa is held in front of the body while played, similar to a guitar.

## Sympathetic or Resonant Strings

Sympathetic or resonant strings produce sound even though they are not played. They are strings on an instrument that respond to the external vibrations of other strings to which they have a harmonic likeness<sup>4</sup>. This harmonic likeness is most noticeable when notes are tuned in unison or are an octave apart. The vibration of sympathetic strings affect the timbre (tone or sound quality) of an instrument.

## Facts About Sweden



- Capital: Stockholm
- Primary Language: Swedish
- Currency: Swedish Krona (SEK)
- Population: 10.4 Million

**For more information about Sweden visit:**

- [Sweden Geography](#)
- [Sweden Cultural Life](#)

**For more information about Northern Resonance visit:**

- Website: [Northern Resonance](#)
- Facebook: [Northern Resonance](#)
- Instagram: [Northern Resonance](#)

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<sup>3</sup> <https://www.nyckelharpa.org/about/what-is-a-nyckelharpa/>

<sup>4</sup> [https://en.wikipedia.org/wiki/Sympathetic\\_resonance](https://en.wikipedia.org/wiki/Sympathetic_resonance)



## STEAM Activity

### What is Resonance?

Resonance is when one vibrating object, say a guitar string or a vibrating glass, causes nearby objects to vibrate at a higher amplitude.

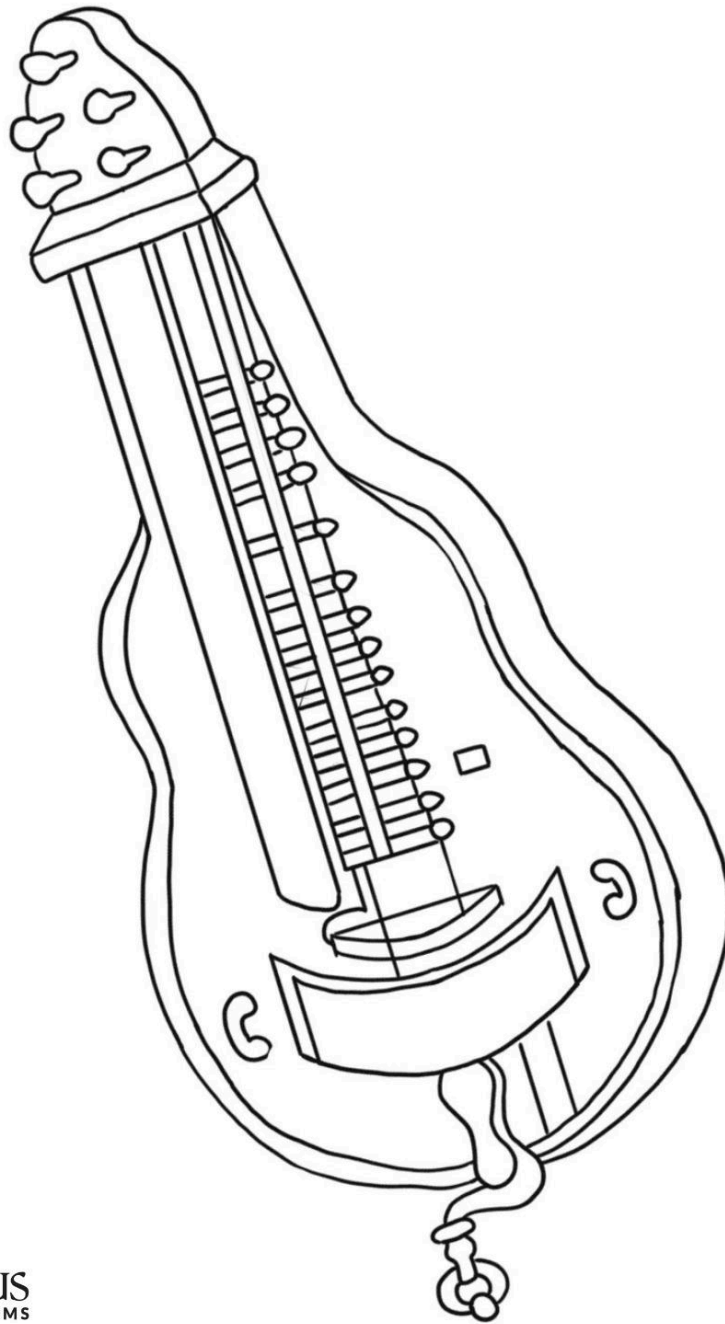
Follow the link below to turn your own head into a speaker! Vibrations from something placed on a speaker and in your mouth will be amplified inside your own head, allowing you to hear music in a different way!

<https://www.exploratorium.edu/snacks/radiohead>

***Did you know*** that Beethoven would use this very method to hear his piano later in his life as he became deaf?



# Nyckelharpa [NICK-el-HAR-pa]



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Special thanks to the **MCCSC STEAM/CS Team** for providing fun STEAM activities for our 2024 Lotus Blossoms study guides!

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