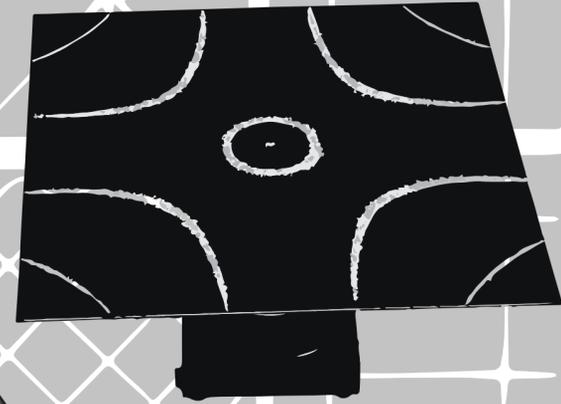
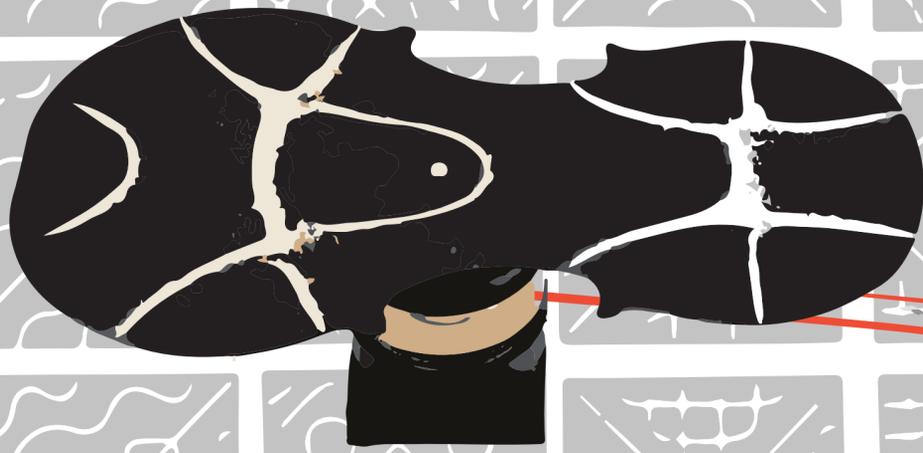


# CHLADNI PLATES



## INTRODUCTION

Chladni plates are unique tools to visualize the properties of waves and resonance. Standing waves can be easily conceptualized and understood with this great invention.

Chladni Plates were invented by Ernst Chladni in an effort to study the movement of sound waves.

## HOW IT WORKS

The scientific principle behind Chladni Plates is the sound waves traveling through the metal plate as a mechanical wave and creates nodes and antinodes. Where two waves merge they are either constructive or destructive thus nodes create a steady point and pattern where the sand particles pile up and create a pattern. Likewise, antinode points also push away and clean out all sand particles to help the pattern to form.

## WEBSITE



## VIDEO



## HISTORY OF CHLADNI

Ernst Chladni's discovery was during the 18th century and although it was past the accepted time frame of the Renaissance (a period of increased interest for art, music, and science), such an epoch of artistry does not truly have a specific cut off date; i.e. after the 15th-17th century everyone dropped their instruments and paintbrushes in utter disinterest and never looked upon them again. Rather there was still growing interest in music and many people were concerned with increasing the quality of sound in buildings. Chladni's insight into the movement of sound waves improved the knowledge of acoustics during this time and in turn proved a boon for the making of better instruments.

*TO SEE MORE SCAN THE QR-CODE*

## FUTURE APPLICATION

Language Arts Connection: Ernst Chladni's experiment helped improve the quality of sound acoustic and reflection in buildings because it increased the understanding of acoustics during the 17th-18th centuries of how and through what sound travels (see Social Studies connection).

As a result of this, buildings where meetings or gatherings are held would have been improved as well with this new information on a coustics and resonance.

*TO SEE MORE SCAN THE QR-CODE\*