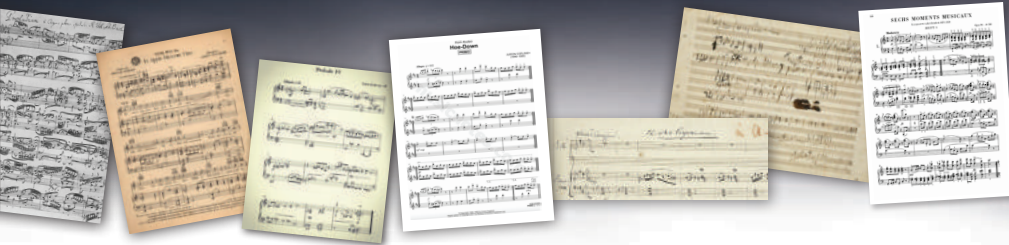


Keyboard Kids' Companion

Created by teachers & approved by kids

Helen Smith Tarchalski, Editor

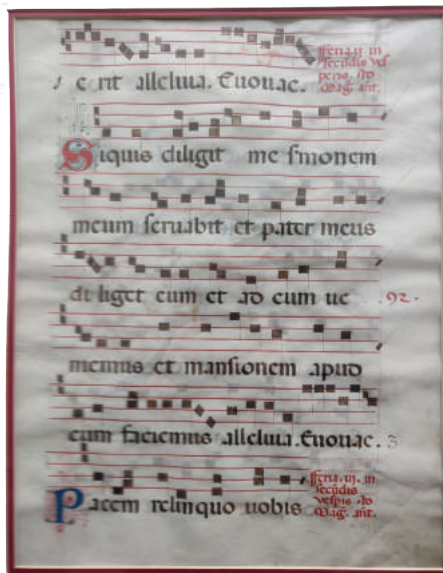


Who in the world invented written music?

We know that those musical symbols on the page, called **notation**, tell us how to play our music. But how did it all get started? And who came up with the ideas? Some of the answers are not clear. Just as in all languages, music notation was very different in the beginning, and it took centuries for notation to turn into today's system.

At first, music notation was created mostly for church music. In early times, some say as early as the 600s, symbols called *neums* or *neumes* (symbols such as ` , ^ , and ') were first used. Neums did not give exact pitches, but were placed over the words in songs to show the melody line going up or down. Neums were a memory tool for singers who had already heard the song.

Around the year 1025, a monk named Guido d'Arezzo described (and perhaps created) a four-line *staff* to help find precise pitches. Lines were added and subtracted during several centuries until our modern five-line staff was introduced. D'Arezzo was also the first to introduce



Early 1400s manuscript from Italy.

solmization (*do, re, mi, fa, sol, la, ti*) as note names to help with pitch memorization. He used the first syllable of each phrase to a well-known Latin Hymn, but we have replaced the original "ut"

with "do" and added "ti." Note heads were square at the time.

In the late 1200s, note shapes began to define rhythm. The beginning of note time values is credited to Franco de Cologne, and rhythmic notation became important because single-line melody style was losing popularity and being replaced by *polyphony* (several melodies working at the same time).

In the late 1400s, time signatures were added, and notes became round instead of square. Bar lines were added in the 1500s and 1600s. At one time, there were fifteen lines on the grand staff! Over time, some of the lines disappeared, and *ledger lines* were introduced in the 1600s for notes between the bass and treble clefs. Dividing the two clefs made music much easier to read.

Music before 1750 (the year that Bach died) had clef signs that moved to different places on the staff. Modern printings of that music are usually edited with clef signs in the familiar places.

New ideas for music notation are still being invented by today's composers!

A Little Weather Music

Did you know that... the music of crickets can tell us about the weather? The discovery of this phenomenon, called *Dolbear's Law*, was credited to American physicist and inventor Amos Dolbear in 1897.

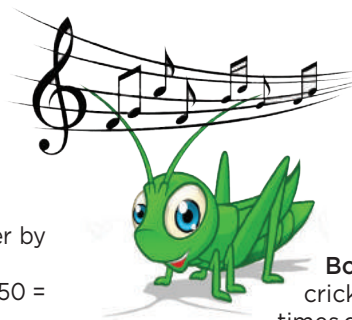
Dolbear's formula for calculating temperature in Fahrenheit is as follows:

Number of chirps per minute minus 40; divide that number by four; add 50.

Example: 80 chirps per minute - 40 = 40; 40 ÷ 4 = 10; 10 + 50 = 60 degrees Fahrenheit.

The Snowy Tree Cricket (*Oecanthus fultoni*) is the most accurate weather predictor, but any cricket will help you do the job.

Here are the tools you need for this summertime weather experiment using music in nature: timer app or wrist watch, pencil and paper, a chirping cricket. Try this simplified version of Dolbear's Law:



1. Listen for a chirping cricket. Count how many chirps you hear in 15 seconds.
2. Add that number to 40. You can very closely calculate the temperature in Fahrenheit!

Bonus Experiment: Listen to the crickets chirping several different times during the day and night. Each time you calculate the temperature, make a sound recording of the chirping. Announce the time and temperature. When you play back the recording, think about the following:

- Are the cricket chirps *slower* or *faster* when the temperature drops?
- Using the music tempo indications *Largo*, *Allegro*, and *Presto*, tell a friend how fast the crickets chirp at each temperature!

Birthdays

June 15

Edvard Grieg
(1843)

Norwegian composer

June 17

Igor Stravinsky
(1882)

Russian-American
composer
and conductor

July 4

Stephen Foster
(1826)

American song
writer

July 7

Gustav Mahler
(1860)

Austrian
composer
and conductor

August 1

Francis Scott Key
(1779)

Author of lyrics to
*The Star-Spangled
Banner*

August 25

Leonard Bernstein
(1918)

American composer,
pianist, and conductor

Alphabet Soup

What's that number?

When you look in a music book or a concert program, you may notice compositions with letters and numbers as part of the title. These are called *thematic catalog numbers* or *thematic index numbers*. They help to organize and identify a composer's works into lists. These lists are sometimes created by the composer or publisher, and they sometimes carry the name of the person who created them. Sometimes the catalogs carry the name of the person who created the list. Indexes can be arranged according to when the pieces were written, by groups of pieces for one instrument, or by categories (such as *sonatas* or *symphonies*).

Op. (Opus) Latin for "work," this is the most common system of organizing music. Used for compositions by Beethoven, Chopin, Clementi, Kabalevsky, and many others. Many well-known pieces are often referred to simply by their opus number.

Op. posth (Opus posthumous) A composition listed after the composer's death.

WoO (Werke ohne Opuszahl) German for "Works without opus number." Used for all of Beethoven's compositions not originally published with an opus number and sometimes for Brahms, Schumann, and Clementi.

BWV (Bach-Werke-Verzeichnis) German for "Bach's list of works"



HWV (Händel-Werke-Verzeichnis) German for "Handel's list of works"

L. (Longo) List of Domenico Scarlatti's music, prepared by Alessandro Longo

K. (Köchel or Kirkpatrick) Köchel refers to the list of Wolfgang Amadeus Mozart's music, prepared by Ludwig Ritter von Köchel. Harpsichordist Ralph Kirkpatrick prepared a list of Domenico Scarlatti's music.

KV (Köchel-Verzeichnis) German for "Köchel's list." Found more often than "K." for Mozart's music in Europe.

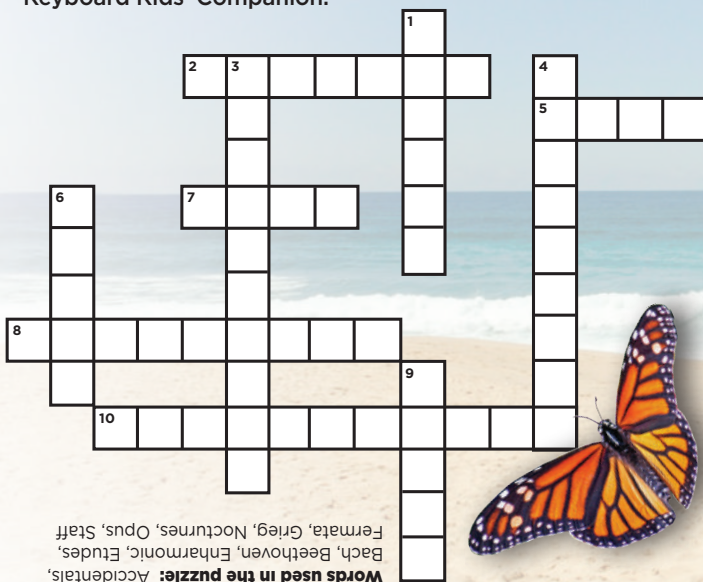
Hob. (Hoboken) List of Franz Joseph Haydn's music, prepared by Anthony von Hoboken.

D. (Deutsch) List of Schubert's music, prepared by Otto Erich Deutsch.

More interesting facts about catalog numbers can be found on the digital version www.claviercompanion.com


Summery Summary

Find the answers in this school year's issues of Keyboard Kids' Companion.



Words used in the puzzle: Accidentals, Fermata, Grieg, Nocturnes, Opus, Staff, Bach, Beethoven, Enharmonic, Etudes,

ACROSS

- Hold this one note for a little extra time:  (Sept/Oct 2018)
- Latin term for "work" used in titles of Beethoven, Clementi, and many other composers. (Summer 2019)
- The Baroque period in music ended in the year that _____ died. (Nov/Dec 2018)
- The music of _____ transitions between the Classical and Romantic periods in music. (Nov/Dec 2018)
- Term for sharp, flat, and natural signs instructing to play notes that are not in the key signature. (Jan/Feb 2019)

DOWN

- French word for "studies" or "exercises." Chopin's were the first to make it as concert pieces. (Spring 2019)
- C-sharp and D-flat are _____ to each other. (Jan/Feb 2019)
- Musical form created by John Field. Chopin composed many and made the form famous. (Spring 2019)
- "In the Hall of the Mountain King" written by _____ (Sept/Oct 2018)
- A monk named Guido d'Arezzo is credited with a four-line _____ to help find precise pitches. (Summer 2019)

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