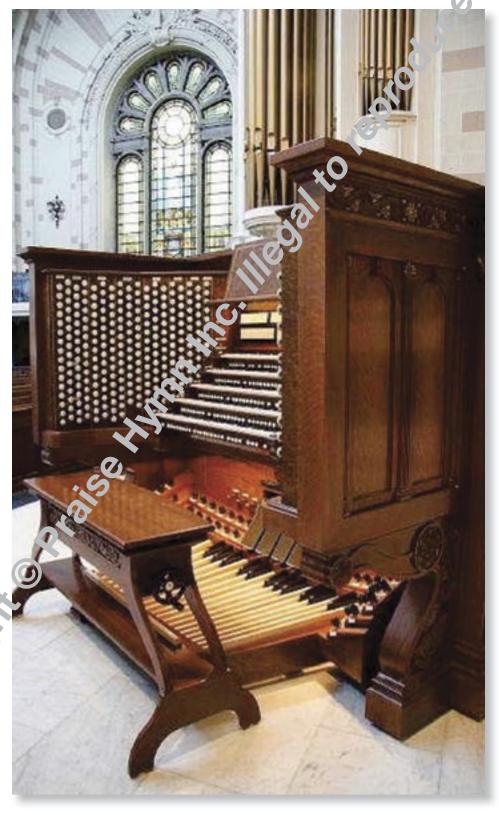
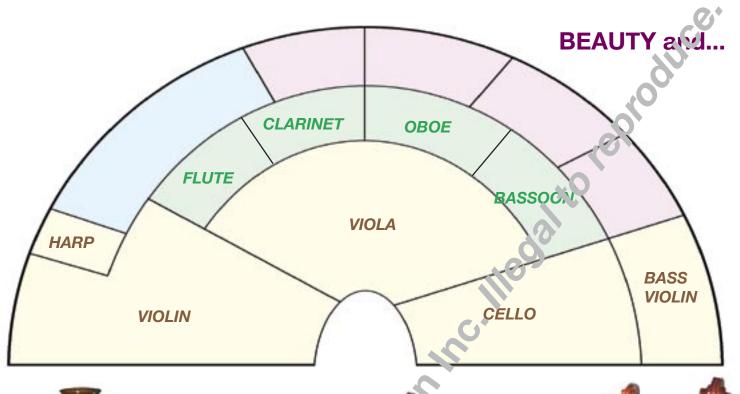


GRAVICEMBALO COL PIANO E FORTE
1. The piano was invented in by an Italian man named Bartolomeo Cristofon. He called his new instrument the "gravicembalo col piano e forte," meaning "harpsic hord with soft and loud." Over time, the name has been shortened to "piano."
2. Grand pianos, like the one below, can be feet long and weigh pounds.
3. A piano has keys that sound 88 different pitches.
4. Inside the piano there are over silver-colored wire high-pitched strings and copper-wrapped low-pitched strings.
5. The shortest string inside the piano is about long. The longest string inside the piano is about long.
6. Each string inside a piano equals the pull of a pound weight, and the tension on all the strings combined is equal to a pound weight.
7. Each key is connected to a mechanism incide the piano called the "action." The action of each key contains over different moving parts, and the entire action of the piano is composed of a total of over parts.
8. One of the most famous piane manufacturers is Steinway & Sons who began manufacturing high-quality pianes in New York in 1856. It takes skilled Steinway artisans about one year to ballo a Steinway grand piano. Steinway & Sons has built over pianos since 1856, and one of their pianos recently sold for a whopping \$!
9. The piano is the runst popular instrument in the world with overin the United States alone. More pianos are produced than any other instrument. It is 1980 (the highest production year recorded) 277,000 new pianos were manufactured. Prices for a new piano today range from \$2000 to over \$
of Instruments," and there is more music written for piano than any other instrument.

The **ORGAN** is a symphony orchestra all rolled up into one instrument. With just a "flick of a switch" the organist can make this instrument sound like stringed instruments. woodwind instruments, or brass instruments. Modern, small organs found in homes and churches produce their sound by electronics and speakers. but larger organs produce their sounds by air blowing through metal **PIPES**. These pipe organs may have thousands of pipes, varying in size from the size of a pencil to the size of a 20-foot tall tree trunk. The pipes are often displayed in lavish decorations in the front of the church, like the ones pictured on page 14. Pipe organs have electric motors that turn a fan, forcing air into a pressurized chamber. Before there were electric motors, several "healthy" church members had to go to the basement beneath the pipe organ and constantly pump air into air chambers while the organist played. When the organist presses the keys on the organ, air travels from the chamber and through the pipes connected to those keys. Each key has several piccs of the same pitch attacked to it. By pulling a lever solled a STOP, the organist con change the sound of the rip is from a soft woodwind or string sound to a powerfully loud brass sound. The croan pictured on this page s the organ at the U.S. Nav 1 \academy, and it has over 100 stops. Volume foot



PEDALS that look like gas pedals on a car control how loud the organ plays. The farther the pedal is preced down, the louder the sound. The organ keyboards, which are shorter than piano keyboards, called **MANUALS**. There may be up to 5 manuals on an organ, each stacked above the other. The organ also has a keyboard for the feet called a **PEDALBOARD**. In addition to the over 500 stops, pedals, and a pedal board, large organs also contain stops which are operated by the feet. Large organs look like they were designed by someone who had 10 hands and 10 feet, but believe it or not, all of these keys, stops, and pedals are played by one very talented organist with just 2 hands and 2 feet!



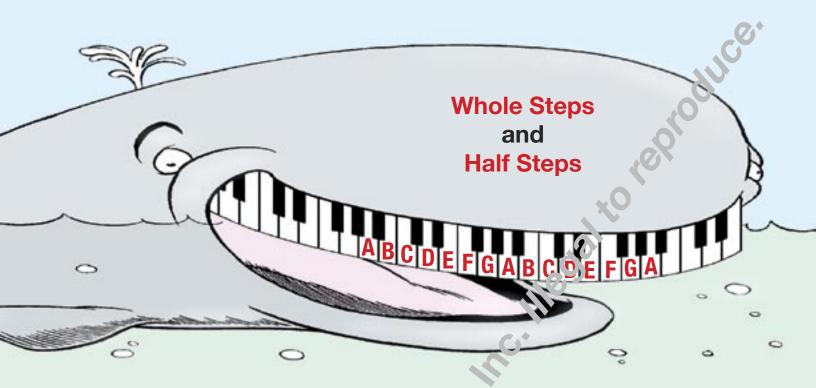


1B. 3P. ŹĄ. 3B. 2B. At age 9, Bach hand-copied an entire library of music. Johann Sebastian Bach was born in Japan ir 1935 Johann Sebastian Bach was born in Germany in 1685. At age 29, Bach hand-copied an entire library of music. Seven generations of Bach's family were professional rousicians. Three generations of Bach's family were professional Ausicians. 4A. Bach memorized almost every musical score in his own library.

4B. Bach memorized almost every musical score in his own library. 4A. Bach memorized almost every musical score in his church library. oh: Bach once Walked 60 miles to hear a concert. ₽ ? ₽ B A. Bach once walked 6 miles to hear a concert. Mond BACHling CAP BROWN ORCE CHEMINIS SMORD BRIDGE BY THE TOTAL BROWN THE SHARE THE SHAR 18. Some of Bach's musical compositions were son for millions.

Were used to millions.

Make to millions. 122. It took modern publishers of your form of the state 118. Some of Bach's musical compositions were sold for millions 128 H to the modern Dublish of Solvens to assemble and Drint Bach's music Pach's music became famous soon affer he died. 104. Bach's music was forgotten soon after he died. 1. Bach claimed that he wrote his misic for the alon of God. 7. Eschilaren. 9A. Each died at age 45. 9E. Bach died at age 45. Each died at age 45. 3



Those aren't your average whale teeth!

It looks like the whale in this picture swallowed a picno, because all of the whale teeth look like piano keys. Look at the "piano keys teeth" mark of E and F inside the whale's mouth. Are there any teeth in between the E and F key 'eeth?

Are there any teeth in between the **B** and **C** key teeth?

Are there any teeth in between the C and C key teeth? (Look carefully.)

Are there any teeth in between the **F** and **c** key teeth? (Look carefully.)

If there are no notes in Lexween 2 keys, the interval is called a HALF STEP.

If there is 1 note only in between 2 keys, the interval is called a WHOLE STEP.

Indicate whether the distance between each interval of a 2nd below is a half step or whole step. Follow these instructions:

- 1. Determine the te ter name of each note.
- 2. Locate each note on the "key teeth" of the whale.
- 3. Determine if there is a black "tooth" note between the two notes.
- 4. Circle where the notes form the interval of a **HALF** step or **WHOLE** step.



Opera

Pretend that you live in the year 1800. There are no televisions, movies, or recorded nusic. There is an elaborately decorated concert hall downtown. You can go there and hear dramatic much performed



with singers in elaborate and colorful costumes accompanied by a live orchestsra. It is called OPERA, and it beats sitting at home in a dark, candle-lit house all night. 400 years later, people all around the world still attend opera.

There are two things that you not look now about opera.

First: There are two kinds of opera...comic opera and tragic opera. Comic opera is usually humorous and deals with light-hearted subjects and characters. Tragic opera is usually serious and ends with the main characters dying.

Second: The parts that opera

singers sing are a clue as to whether they are "good" characters or "bad" characters. Women with high voices (called "sopranos") and men with high voices (called "tenors") are usually "good" characters or heros. Women with lower voices ("mezzo sopra ")" or "altos") and men with lower voices ("baritones" or "basses") are sometimes "bad" characters or vivains.

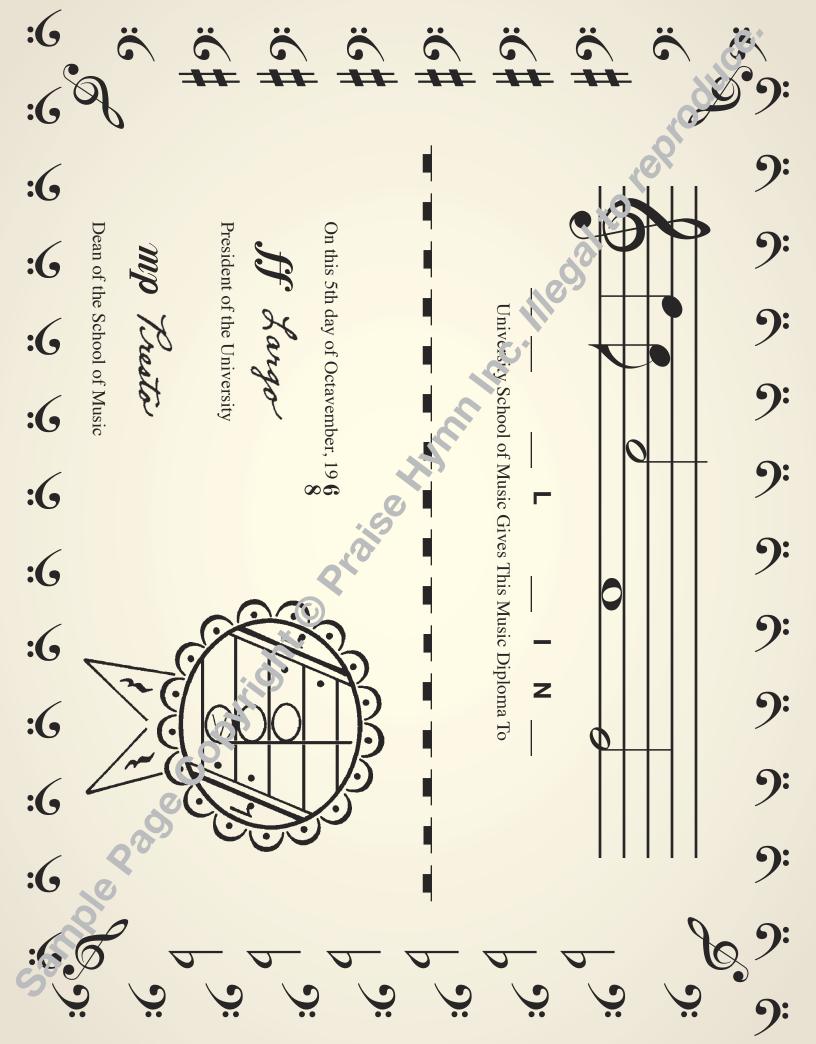
INTERESTING FACTS ABOUT LA SCALA

La Scala in Milan, Italy became the most famous theater for opera. It was first opened in 1778. The main floor had no chairs. The audience watched the opera standing up. There were over 3,000 seats arranged in the boxes around the theater. La Scala was the main meeting place for the noble and wealthy citizens of Milan. La Scala was originally illuminated with over 1,000 oil lamps mounted around the treater. Several rooms were filled with hundreds of water buckets in case there was a fire from the pil lamps.

The oil lamps were replaced by gas lamps, then electric lights in 1883. In 1943, during World War 2, La Scala was severely damaged by bombing. It was rebuilt and reopened on May 11, 1946. La Scala's opera season traditionally opens on December 7, Saint Ambrose's Day. All percomances must end before midnight to long operas start earlier in the evening. No one is allowed to enter after the performance has begun, and no exceptions are made, even for four ous or wealthy people.

Now, let's hear some opera music!





A Wacky History of Music

written by I. M. Confused

1. When Bach was born in Italy, his mother had to hide him in the church bell tower to keep him from being killed by an invading army. 2. At age 9, Voldi hand-copied an entire library of music. 3. Beethoven wrote a total of 12 operas, the most famous of which

score in his church library. 5. Liszt's father often got him out of bed at night to come play the piano. 6. Verdi once walked 63 miles to

was Aïda. 4. Verdi memorized almost every musical

hear an organ concert. 7. Verdi claimed that he wrote his music "for the glory of God." 8. Liszt had 20 children. 9. Bach wrote Aïde to celebrate the completion of the Suez Canal in Egypt. 10. Beethoven's opera Aida became one of the

most famous operas of all time. Because he was so popular,

ladies often Qught over Verdi's handkerchiefs and green silk gloves. 12. During performances that **Ba** directed, he would often jump, sing,

shout, and crouch Jown very low. 13. Verdi spent 10 to 12 hours

a day practicing the piano. 14. Teethoven was a much-loved person in Italy and was even elected a ser stor in the Italian legislature. 15. Liszt used his great wealth to build a hospital ver poor people in his district, and in honor of his wife, Guiseppina, he build a retirement home for musicians. 16. Verdi died at age 75,

and his music was forgotten soon after he died. 17. Some of Beethoven's musi-Beethoven

cal compositions were used to wrap meat. 18. Bach is considered to be one of the greatest pianists who ever lived. 19. It took modern

publishers 50 years to assemble and print Verdi's music. 26 When published, Liszt's music filled 60

Verdi

Liszt

large volumes. 21. As he grew older Bach

became deaf and was unable to hear

the music he composed. 22. At Beethoven's funeral, over 200,000 people gathered to sing opera as his funeral procession passed through the streets.