

# MAGICAL STRINGS

## STUDY GUIDE

### I. PROGRAM DESCRIPTION

A **MAGICAL STRINGS** school assembly includes performances of original compositions and traditional Celtic music, interspersed with lecture material about the history and legends at the root of this rich European culture. The program draws from a repertoire that is both traditional and contemporary.

The program begins with an introduction of the musicians and of **MAGICAL STRINGS**. Then follows with a brief description of the three types of Celtic music (Irish, Scottish, Welsh). A medley of Irish tunes is played that includes "Paddy Gavin's" and "The Cameronian reel", followed by an air from the 16<sup>th</sup> century harper Cornelius Lyons called "Miss Hamilton". A postscript is added to explain that people's names were commonly used in song titles as a way to honor patrons and supporters of musicians in ancient times.

A description of one such musician, Turlough O'Carolan, follows with a narrative describing the events of the 16th and 17th centuries that lead to the persecution of the "harpers" and "bards" by Cromwell and his politicians. A lively medley of traditional Irish dance tunes is played that includes jigs, reels, hornpipes and slow airs. The students are encouraged to clap along in order to learn the rhythms of each type of tune. It is explained that these songs show how the common people used their music to deal with oppressive times.

After a description of the "three mystical moods of music" from the old bardic tradition, the program shifts into a modern realm with a brief discussion of why Pam & Phillip Boulding are performing such "ancient" music. The musicians describe the merits of saving a lost art, a lost history and a lost craftsmanship. They then play "Crossing to Skellig", an original composition that combines traditional and modern styles of Celtic music. The musicians explain the song's path, a journey to the massive 700 foot rock pinnacle 8 miles off the coast of Kerry, where they discovered a great sense of peace amidst the ruins of a sixth century monastery at its summit.

Now the focus shifts to music and harp-like instruments from other cultures around the world, and the commonalities that link our cultures. Philip will demonstrate the valiha, a bamboo harp from Madagascar; the kora, a double-strung gourd harp from Gambia; and the Koto and Cheng from Japan and China. Emphasis is placed on the arts as a medium for working toward understanding, reconciliation, and peace in a world filled with conflict.

The next segment focuses on the art of instrument construction. They describe the types, origins and effects of the woods used; the types of strings for differing sounds, the parts of the harp and dulcimer, and the different ways to play the instruments.

The program includes another original composition, "Winter into Spring", inspired by the changing of the seasons amidst the splendor of nature in our native Northwest, and ends with "Mike Rafferty's Reels", with students again clapping to reinforce the rhythms of the Irish dance tunes. The musicians remain in place as the students are dismissed and they encourage the teachers beforehand to have the students pass by the instruments as they leave so they all get the chance to see the instruments close-up. A question and answer session may follow as time allows. The order, content, and range of material may vary slightly with each assembly according to the number and ages of the students.

**Study Guide**  
**Educational Benefits**

**BACKGROUND & TRADITION**

- 1) Students will learn the geography and origins of Celtic music. 2) They receive an historic overview of the politics of the 16th and 17th centuries.
- 3) They experience a personal connection to the musicians and artists of the day.
- 4) The rhythms of traditional Irish dance music are learned and reinforced.
- 5) The students experience the sense of awe that accompanies learning an unfamiliar music history.

**MODERN APPLICATIONS**

- 1) The students are taught the importance of the preservation of Celtic history and the importance of preserving our own history in music.
- 2) They experience how modern music is affected by a variety of historic traditions.
- 3) They explore the relationships of the dulcimer and harp to the modern day piano and harpsichord.
- 4) They explore music and storytelling as an expression of their own troubles and feelings.
- 5) They experience and learn firsthand the creative process at work in a spontaneous way.

**INSTRUMENT CONSTRUCTION**

- 1) The students learn the types of woods used in the construction of the instruments.
- 2) They learn the origins of the materials and the importance of preserving our dwindling natural resources.
- 3) They experience and understand the effects of different materials in the production of musical sound.
- 4) They receive an overview of music theory in the construction and tuning of the instruments.
- 5) They learn and apply the principles of geometry and math in relation to music.
- 6) They appreciate the experience of the creative process at work.

**II. ABOUT THE ARTISTS**

Philip and Pam Boulding have performed on radio and television networks around the country, including "A Prairie Home Companion", NPR's Weekend Edition, CNN both at home and in Europe, and prime time TV in Japan. They have placed first in a group competition in Ireland, have collaborated with Northwest ballet and theatre companies, and performed for Boris Yeltsin when he visited Seattle. In the summer of '98 they returned to Ireland where they composed new music as part of an artist residency in a cottage by the sea, awarded to them by the Cil Rialaig Irish arts organization.

The Bouldings run the well-known School of Magical Strings, inspiring students of the Celtic harp and hammered dulcimer since 1978. Unique to this art form, they build and craft the instruments they play. They have built over 2,000 for an international clientele. Philip and Pam love to share their music with children and have performed in schools throughout the country, including Waldorf schools where for over ten years they have taught harp, lyre, painting, and orchestra classes. Called by local media the "Von Trapp Family of the Northwest", their love of music is embraced by all five of their children ages 20 to 30, who return from graduate school and careers across the country to present their annual Celtic Yuletide Concerts – a collaborative effort that also includes a host of guest artists including Irish dancers, jugglers and story tellers - in cathedrals and concert halls throughout the region. Their music is highly regarded by accomplished musicians around the world and they are dedicated to creative music events that preserve an art once thought lost to the ages.

### III. BACKGROUND INFORMATION

#### History and Tradition

The harp and hammered dulcimer are instruments of very ancient origin, with evidence of their evolution found in every part of the world. Their common feature is that they both have many strings, all tuned to the different notes of the scale. The harp is played by plucking the strings with the fingers; whereas, the dulcimer is played by striking the strings with small wooden hammers, creating a percussive ringing sound. The hammered dulcimer has roots and commonalities with the santur in ancient Persia dating back 3,000 years. The name 'dulcimer' has a latin origin meaning "sweet melody". The dulcimer has a trapezoid shaped sound box with metal strings stretched over the top of it, running over a series of bridges which help create all the different notes. The harp is basically a triangle made up of a sound box, strings arm, and fore pillar. The strings run from the sound box through the air to the string arm, and can be played from either side. Both instruments have evolved respectively in the present day keyboard instruments of two types; a.) the harpsichord, with quills that pluck the strings, and b.) the piano, with felt hammers that strike the strings.

There are two basic kinds of harps; the wire-strung harp, and the gut (or nylon, the modern-day substitute) strung harp. Gut strings create the mellow, soft tone which most of us associate with the harp, and wire strings create a haunting, ringing tone that requires a different technique of playing with long fingernails, used by the old harpers of Ireland and Scotland. The Celtic people of Ireland, Scotland and Wales are considered to have developed the art of harp playing and making to its highest form, giving the instruments the distinctive graceful styling of curves associated with the Celtic harp. Often their instruments were ornately carved and inlaid with precious stones and metals. Celtic art, craftsmanship, and culture in general, were developed to a very high degree, as displayed by their incredibly intricate knot-work patterns.

The time of Oliver Cromwell (1599-1658) began to see the swift and tragic decline of the Celtic harp. Under British rule, Cromwell began to undermine the Celtic culture by relentlessly persecuting their musicians and poets, and many of the old harps were destroyed.

In earlier times, the harpers enjoyed a status almost equal to that of kings, and according to tradition, were masters of the mystical moods of music. In Gaelic this was called "Abhan Trireach" (pronounced awan treeroch), which was made up of three elements: "Geantraí", the music of love and laughter; "Goltraí", the music of sadness; and "Suantraí", the music of rest and tranquility. The dance form known as the Irish jig evolved with "geantraí", while "goltraí" was often represented by laments composed in honor of heroes tragically killed in battle. With "suantraí", it was frequently the harper's responsibility to sooth the king and queen and take their minds off the affairs of state, or to help them sleep at night.

In Wales the style of music was different and somewhat simpler. Their harps were usually gut or silk strung, constructed with a straight fore-pillar. They held rigorous competitions, and their most distinctive musical discipline was something called "penillion", in which the harper was given a melody, with which he was required to improvise variations together with a singer or poet without interrupting the rhythm or creating dissonance.

Turlough O'Carolan (1670-1736), generally considered the last of the great Irish harpers, was born at a critical turning point in Irish history, and lived during a sensitive period shortly after the time of Cromwell. He had to be careful that his musical style fit within the accepted genre of the time. Thus, he ingeniously blended an Italian influence with a

distinctly Irish flavor, and won many a patron's heart with his wit and humor, combined with captivating harp music of his own composing. His melodies are still much loved and played to this day. Composing is an important part of keeping a tradition alive, and this constitutes one of the most important aspects of the Bouldings' work.

### Instrument Construction

The materials that go into the building of these instruments is most important to the type of sound produced. Firstly, the woods used produce the resonance and tone that is part of the authenticity of the instrument's sounds. There are two basic types of wood used: hardwoods (walnut, maple, cherry, koa, mahogany), and softwoods (fir, spruce, pine). Many of these woods can be found in the Pacific Northwest; others from around the world. The earlier Irish harps were thought to have been made from willow. The sound boxes were carved and hollowed out from a single large piece of timber. The curve and pillar were cleverly assembled to the box with mortise and tenon joints in such a way that, without the use of glue, the whole instrument was held together purely by the tension of the strings.

Secondly, the type of strings used make a variety of sounds depending on how they are played (either by striking or plucking). The two basic types of strings used are made from wire or nylon. Wire strings produce a haunting, ringing tone that requires a special technique when played. Nylon strings create a mellow, soft tone that is usually associated with the present day harp.

"Striking" the metal strings of the dulcimer with "hammers" produces a hard, ringing sound. The modern instrument created from this type of instrument is the piano. The plucking of the nylon strings of the harp produces the sound that was later made into the harpsichord. Other stringed instruments have the Celtic ancestry to thank for their creation.

The shape of the instruments, along with their geometric construction, affects the sounds and tones of the dulcimer and harp. The dulcimer is usually constructed in a "trapezoid" while the harp is more like a "triangle". Many variations of geometric patterns exist in both ancient and modern-day musical instruments, based on the universal premise of the harmonic curve, which graduates the string length from the shortest to the longest, according to their pitch and the musical scale to which they are tuned.

## **IV. CLASSROOM ACTIVITIES**

The students are always encouraged to apply the principles of this ancient art form to their everyday experiences in music. A student does not need fancy woods and strings to create a stringed instrument of their own. Many have experienced the phenomenon of tone production with simple rubber bands. **MAGICAL STRINGS** highly encourages the students to experiment with the production of sound, and for the students to work together in rhythms and with music that is familiar to them. Questions may be directed to Pam and Philip after the program. There are also workshops available as a follow-up to the **MAGICAL STRINGS** program. The following is a list of suggested classroom activities:

### A. Preparatory Activities - Grades K-6

- Read background information from study guide.
- Look up information on Irish history and music in the library.
- Find recordings of Irish and Celtic music to listen to in the classroom; try to determine what instruments are being played.

- Look up and study any information on stringed musical instruments.
- Encourage students to bring their own instruments to class and talk about and demonstrate them.
- Have students draw pictures of instruments they have seen.

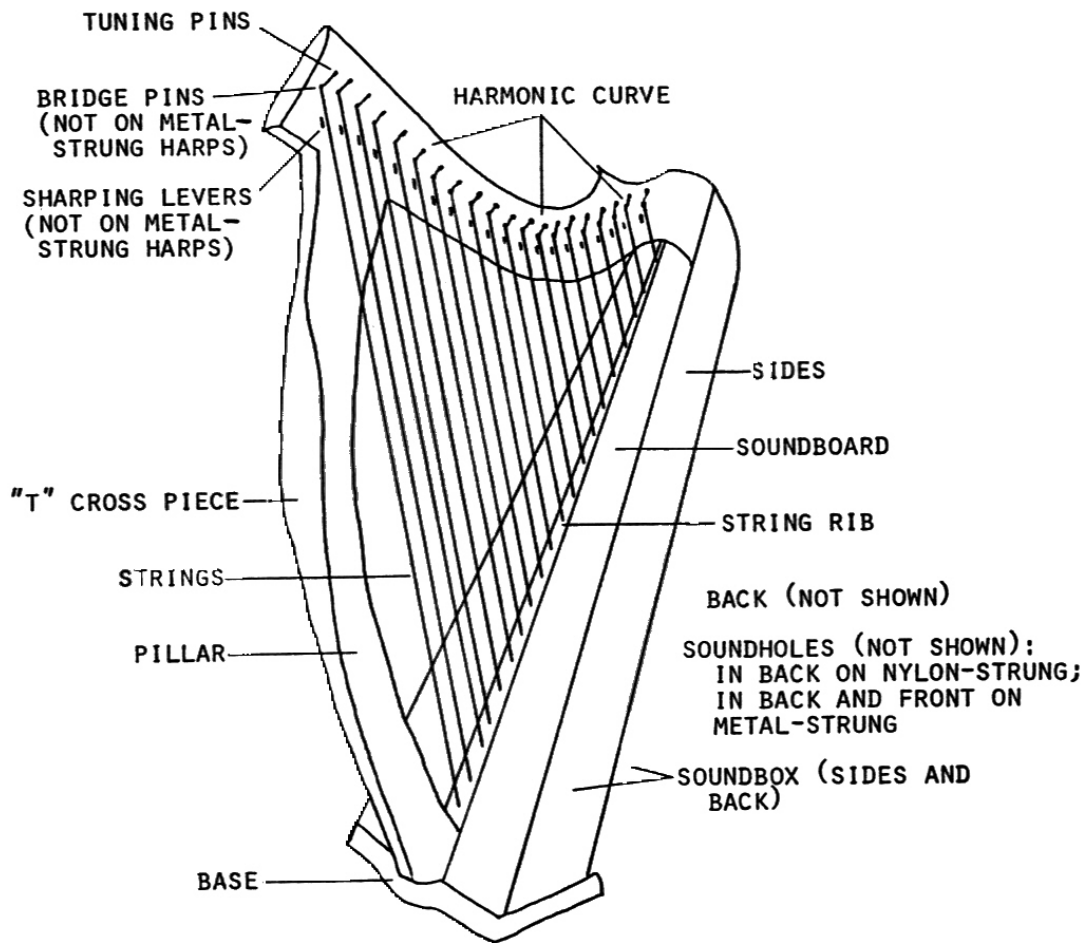
#### **B. Follow-up Activities - Grades K-6**

- Have children draw pictures of their own images from stories told by the artists.
- Listen to more traditional Irish music, have children clap along. If appropriate (for older grades, or music class), try to determine the time signature (i.e. - 3/4, 4/4, 6/8 time).
- Try a simple instrument construction project; there are various books for children on the subject.
- Discuss sources of ethnic music from other lands, and the kinds of instruments they use.
- Instruct the students to write their own story, or a poem, inspired from some aspect of the program they heard.
- Give the students a quiz based on what they learned from the program.

The following are some suggested quiz questions, some of which may encourage further classroom discussion:

- 1) What three countries does Celtic music come from?
- 2) Who was Turlough O'Carolan? What instrument did he play?
- 3) Who was Oliver Cromwell? What did he do to influence music?
- 4) When did Celtic music become popular?
- 5) What are the two types of woods used in constructing harp and dulcimer?
- 6) Can you name two woods from each category?
- 7) What are the two types of strings used?
- 8) What tone does each produce?
- 9) What are the two ways to play these instruments?
- 10) What are the modern instruments associated with the harp and dulcimer?
- 11) What are the shapes used for the harp and dulcimer?
- 12) How many stringed instruments can you name?
- 13) Can you name a song that tells a story?
- 14) Can you tell a story with music?

# PARTS OF A HARP



In order to coax a relatively low-pitched tone from a musical string, its vibrating length must be relatively great. For hammered dulcimers, this means using strings whose vibrating lengths are comparable to the full width of the soundboard. This is achieved traditionally through an ingenious idea of cutting holes in the treble bridge (or making it in separate pieces; one for each course). The bass strings pass over their own bridge(s), placed near the right margin of the soundboard. They then angle downwards to the left, passing through the holes cut for them in the treble bridge and thence to the left-hand bridge and on to the tuning pins. In effect, this is not unlike what happens as the warp threads pass through the heddles of a weaving loom. Near the middle of the instrument, all treble strings are relatively far above the soundboard, while the bass strings are comparatively lower in position. Near the bass bridge, the reverse is true, making it all but impossible to strike both bass and treble strings at the same time at either of these two locations (see fig. 9). Obviously, the bass bridge needs its own set of holes for the treble strings (or: it can be made in separate pieces; one for each course).

