Program Name: iMusic: The Sound of the Future

Artist: Roger Pitts

Special Requirements:

30 minute set up; table for computer equipment

Special Points of Interest:

In 1958, Max Mathews, at Bell Labs, began experimenting with computer programs to create sound material. Mathews and Joan Miller, also at Bell Labs, write MUSIC 4, the first wide-spread computer sound synthesis program.

Performance Description

Computers have had a tremendous impact on the music we hear. Microprocessors are involved in every component of the musical experience, from recording equipment to the digital satellite radios in our cars. But the electronic computer's influence on music dates back nearly 50 years.

Roger Pitts introduces students to computer-aided music production and performance in this workshop. Students will have the chance to learn how computers and technology shape modern musical instruments and compositions.

Roger introduces the program with a performance of short musical pieces utilizing various musical styles and technologies. This prepares the students to explore the components of computer-based music compositions: synthesizers, Musical Instrument Digital Interface (MIDI,) sampling, and sequencing.

Roger concludes the performance by working with student volunteers to record a song using the computer and musical instruments.

Educational Objectives & Standards

Students will:

- Explore how computers and technology have shaped modern musical instruments and compositions
- Participate in creating a original song utilizing computer-based musical instruments

Technology:

- Knows the characteristics and uses of computer hardware and operating systems
- Knows the characteristics and uses of computer software

Artist Bio: Roger Pitts

Roger Pitts received his Bachelor of Arts in Music from the Conservatory of Music, University of Missouri, Kansas City. His primary areas of study included guitar, piano, music composition, and computer-aided music production.

A former recording engineer and head of computer-aided music production for Woodland West Studios, Roger moved on to establish his own studio: Roger Pitts Music.

His list of national accounts grew as he continued to develop his own original compositions utilizing computers and traditional instruments.

In 2002, Roger completed the CD, *Seven Wonders*, an ambitious collection of mixed musical styles that he wholly performed.

Roger performs throughout the United States as a member of the Heartland Arts Fund Touring Roster.

Vocabulary

Composition: An arrangement of artistic parts so as to form a unified whole.

Computer: A device that computes, especially a programmable electronic machine that performs high-speed mathematical or logical operations or that assembles, stores, correlates, or otherwise processes information.

MIDI (Musical Instrument Digital Interface): standard for representing musical information in a digital format; software that conforms to this standard, used for composing and editing electronic music.

Sampling: A usually digitized audio segment taken from an original recording and inserted, often repetitively, in a new recording.

Sequencing: A melodic or harmonic pattern successively repeated at different pitches with or without a key change.

Synthesizer: An electronic instrument, often played with a keyboard that combines simple waveforms to produce more complex sounds, such as those of various other instruments.

Waveform: The mathematical representation of a wave.

Post-Performance Activities

1. Listen to a few of your favorite musical recordings. Try to identify the musical elements that were created on a computer. Can you hear a *sequence* or *sample* that came from another song?

2. Go to the library and research music theory. Music composed using a computer or played with traditional instruments generally conforms to traditional music theory. Can you identify any songs that don't conform to traditional music theory?

3. Ask your parents permission to install software on your computer that will allow you to compose music. Start with a simple tune, then experiment with notes and chords.