



## Music Technology Lessons

### Lesson 007

#### DATES \_\_\_\_\_

The 2nd through 5th Grade students receive one 40 minute lesson per week.

#### Lessons © [www.musictechteacher.com](http://www.musictechteacher.com)

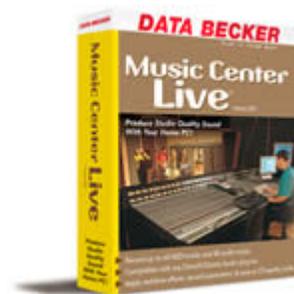
After studying MIDI and Sound Waves, students want to know the process of making a CD. There are many ways to make CD's. The following is the method that we use for making CD's from the students' MIDI compositions.

#### Objectives:

- \*Students will complete their own composition (ABA song form, C Major scale, 32-60 measures) using the keyboard and sequencing software on the computer to playback the song.
- \*To continue working on pp. 22-35 or more in the Alfred Basic Piano Library Level 1A (varies based on student level).
- \*To complete one or more Lessons in Music Ace 1.
- \*To complete one or more quizzes on our web site and report scores to the teacher.
- \*To complete a study on how to transfer students' compositions from MIDI file to CD Audio files.

#### Materials:

Alfred 1A Piano Books, keyboards and related equipment, computers (with or without Internet access), printer, Sibelius or Music Time Deluxe and Music Ace 1 software and teacher's manual, music mixer, CD-R disks, necessary audio cables for transfer of music from keyboard to mixer / computer, Data Becker Music Center software. (2006 - We have changed to Sony's Acid Music Studio for editing software.)



**Procedures:** Review the differences in MIDI and sound wave files. MIDI files have to be converted to sound waves using a mixer and other instrument, such as a keyboard, to record the file as a sound wave into the computer before it can be recorded to a CD.

Students will start by saving their MIDI composition onto a floppy disk. We will take the disk with the MIDI file and insert into the floppy drive built-in to a General MIDI keyboard. We do this because our computer cannot have two different MIDI / audio software programs open at the same time by our sound card.

The keyboard is connected to a small mixer which can (more adequately) control the volume of the keyboard going into the computer. We will use a recording program, such as Music Center (Data Becker) or Acid Music Studio (Sony) to record the music into the computer as a wave file from the keyboard. Students will hear the composition as the keyboard sounds when it is playing (as opposed to hearing the sound from the computer's sound card).

We will use Music Center or Sony's Acid Music Studio to 'trim' any extra sound before and after the song, leaving 2 or 3 seconds of silence at each end of the song. We are now ready to use our CD writer to save the wave files to a CD-R. We will make an audio CD, not a data CD. Audio CD's can be played in a regular CD player or on the computer. Students will create and print labels for their CD and will take them home to give to their families. Please note that after their 'first CD' is created and taken home, the excited students will want to make one each week.

(See pictures below of keyboard / mixer / computer connections.) As of 2006, we use Sony's Acid Music Studio to edit wav files and convert files to MP3's.

 Demonstration of MIDI file using rhythms MIDI (1KB)

 Demonstration of Sound Wave using rhythms WAVE (26KB)



We use MIDI interface cables to connect the keyboard to the computer. USB to MIDI devices are also available.



The keyboard is connected to the mixer.  
Some keyboards have a floppy disk drive built in.

**Ask students to notice.....**

- What kinds of music would you classify your song? i.e. modern, jazz, classical, etc. \_\_\_\_\_
- Does your CD sound differently than you thought it would sound when you recorded the MIDI file? \_\_\_\_\_
- Does your song have any patterns or sections outside of the ABA form? \_\_\_\_\_

- What student created your 'favorite song' in your group?\_\_\_\_\_ Why did you like it?\_\_\_\_\_
- Are sound waves larger in file size than MIDI files?\_\_\_\_\_ (Yes, much larger)
- Why would it be difficult to place the wave file (instead of MIDI) on our web sites?\_\_\_\_\_
- Why should we use the mixer to connect the actual sound from the keyboard into the computer?\_\_\_\_\_
- What will your next song include that you didn't have in the first song? i.e. percussion, other instruments.\_\_\_\_\_
- Did you notice any dynamic changes to your first song? (No)\_\_\_\_\_ Why? (our keyboards do not have touch sensitive keys).

### Data Becker Music Center Software



### Compositions

Students should complete their first compositions in ABA song form discussed in previous lessons. The composition should have notes in the treble clef starting with Middle C or higher, and use notes in the C Major Scale, 2 staves and 32-60 measures. We will use many of these compositions on our first CD's. Our next compositions will call for dynamic changes and a percussion part.

Music Ace 1 - Students will continue to progress at their own pace through the lessons on the computer. Teacher will assist with students and their questions. Some students will have completed Lesson 6 or higher by this time. Worksheets and lesson benchmarks are listed in the Teacher's Manual for the Music Ace software.

Alfred Basic Piano Book 1A - If time allows, students will work individually on pages 22-35, with assistance and demonstration of notes and technique by the teacher. The teacher will follow the lesson goals and procedures as outlined in the teacher's manual for the Lesson books.



**Extra Activities:**

Work on musical skills through some of the quizzes and games on the Music Tech Teacher Quizzes and Games pages. Choose games according to the skill level of the students.  
Post student compositions in MIDI or Scorch (Sibelius) form on the Student Work pages of this site.

**Evaluation:**

- \*Students will be able to successfully perform all of the exercises on pp. 22-35 of the Piano Level 1A Lesson Book.
- \*Students will complete their first music composition in ABA form, using the treble clef and notes of the C Major Scale, 2 staves, the General MIDI sound sheet, no longer than 32-60 measures.
- \*Students will successfully complete Lesson 6 or higher in Music Ace 1, and will print a Progress Report of their work to give to the teacher and to their parents.
- \*Students will be able to describe the process of taking their MIDI music composition and convert it to a CD Audio file. Some of the students will assist the teacher in completing the process of creating the CD's and making labels for their first CD creation.

Notes: \_\_\_\_\_

**Lessons © [www.musictechteacher.com](http://www.musictechteacher.com)**