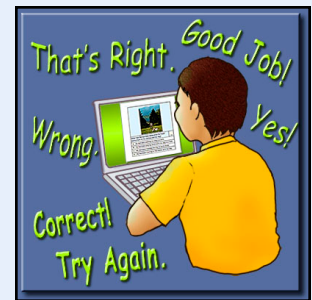


Feedback Sounds Using Computer Voices

It's important to give students feedback as they work on tests or practice activities. You can download sets of ready to use feedback sounds from the Annie's Resource Attic website, but you can never have too many feedback sounds. Since you may want additional or different phrases, here is how I created each of the sound sets.

I worked on a Mac computer in an excellent text editing shareware application, Tex-Edit Plus® (That's not a typo; the author is a Texan :). I like to use that app instead of Text Edit® because it lets you change the pitch and modulation of voices as well as the speech rate. Tex-Edit Plus only runs on Mac, but on Windows you can use any application such as NotePad® or Adobe Reader® that has an option to speak the text aloud.



You also can use a free online application, Natural Reader®, which has a demo area where you can paste your text and have it read by any of a long list of voices. My favorites are Julia, Crystal, Ryan, and Ray of the American voices, and Graham and Lucy of the British voices. All these voices are very high quality. However, I felt the need to slow down all of them!

Whichever application you use, here is an overview of the process of making a set of feedback sounds, followed by detailed instructions on all the settings and steps.

Want more free activities, tips, and graphics? Look in the Attic!

1. Type each phrase. Hit return between phrases, so that the computer voices reads each one separately. If the computer voice still runs them together, put a period or an exclamation point between phrases.

2. Next, select the text and turn on speech. For each voice, record the entire set all at one time in Audacity®, and save an **Audacity Project** file for each voice. That way, all the feedback phrases from a given voice are the same volume and speed.

If you're unfamiliar with Audacity, it's an excellent FREE sound editor for both Mac and Windows. A link to my post about it is at the foot of this page.

3. The final step for each feedback set is exporting individual phrases. This is the only tedious part! Select each phrase, then choose **Export Selection** from the **File** menu. Do this twice for each phrase, changing from **.mp3** to **.wav** file format. Be sure to manually add the extension, and check that the extension matches the file format chosen.

Record With Audacity

Record each voice, beginning by starting a **New** document in Audacity. I used the defaults, **Stereo** and **44100 Hz**. You may prefer mono and a lower rate. For these short phrases, I used high quality settings. Do a preliminary testing to choose the volume setting for a good recording.

Click the **Record** button, and you'll see the cursor zipping along generating recorded silence. It's easy to delete that silent leader from the soundtrack later. I turned on **Read Entire Document in Tex-Edit Plus** to do my recordings. Depending on which app you use, you might have to select all the text first or do some similar action. When the voice finishes reading, return to Audacity and click the **Stop** button.

The result is a soundtrack with spaces between individual phrases, making it easy to find the edges of each one. Select the blank area at

the beginning and delete it. Repeat that procedure for the trailing silence and various noises you make getting back into Audacity and stopping the recording. This gives you the master file for each single voice, which you should save as an **Audacity project** file.

Edit The Master Soundtracks

Next do the final editing. Computer voices generally read evenly, at about the same volume and speed throughout, certainly more evenly than I could speak! But now and then you may find a word that seems quieter. If you find louder or softer spoken words, select the phrase or single word and use the **Amplify filter** to change its volume a small amount. You'll have to do a bit of trial and error to locate the edges of a single word or syllable in the waveform timeline. The goal is to select just the part that is too loud or soft, and immediately apply **Amplify**. Then save the master file again.

Repeat this process for each of the voices. It's best to use the highest quality voices installed on your computer. To switch voices, I used the **Speech Options** within Tex-Edit Plus. If your text program doesn't have speech options, you can temporarily change the system speech settings instead to switch voices. If you don't have ANY high quality voices installed, you should go to the online application. It's not worth the labor to try to make feedback sounds with robot-y voices!

Producing More Voices In Audacity

In my case, there were only two male voices, one female voice, and one child voice that were of good enough quality to sound human. In spite of that, I ended up with more than four feedback sets. I was able to create variations by adjusting those default voices in Audacity.

Audacity has a bewildering array of choices under the **Filters** menu, but there are only three you need to understand to make these feedback sounds. One is **Amplify**, to raise or lower the volume of

individual phrases or an entire soundtrack. That one you've already mastered!

Another is **Change Tempo**, which changes the speed and therefore the duration in seconds of the recording without affecting the pitch. You might need that if the text application or system you are using has no way to change the speech rate. If it has that option, it's probably better to adjust the voice rate before recording, but it's nice to also have the option to make final adjustments without starting over.

The filter you need in order to produce more voices that sound different is **Change Pitch**, which raises or lowers the pitch of a voice without affecting the speed of the speech. Simply **Select All** of a soundtrack, and you can then use **Change Pitch** with no fear of producing chipmunk or zombie voices.

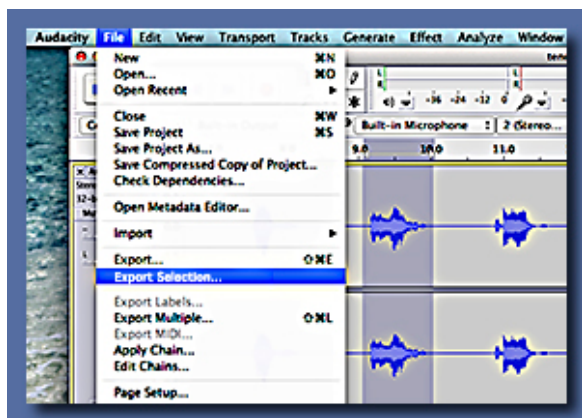
With all three filters, the key to success is restraint. Make a small change and test it with the **Preview** button before committing. I find that the default suggested changes are invariably much too much, so expect to cut way back.

I used **Change Pitch** to raise one of my male voices from baritone to tenor, and the female voice to a child's voice. The other child voice is from one that comes on the Mac. I had to do some additional tweaking with the **Bass/Treble filter** on that one. To make these changes, be sure to select the entire soundtrack so that your new voice is consistent for all the phrases, then save it under a new name.

Export Individual Phrases

Once you have soundtrack(s) for one or more voices saved, begin exporting the individual phrases. Make a new folder for each voice. Open one of the soundtracks saved in Audacity. Select one phrase. You should see silence on either side of it, making it easy to select. Click the **Play** button to check that you have the sound you want.

Choose **Export Selection** from the **File** menu. Be sure you don't accidentally choose **Export** or you will get the entire soundtrack! Type the sound name in the **Metadata** dialog and again in the **Save** dialog. Choose the file format you need, and double-check that the extension on the name matches that choice. **Save** into your prepared folder.



To save in more than one format, repeat while the sound is selected, choosing the new format and typing the new extension. In choosing formats, .mp3 is a smaller file size and works in most applications including IntelliTools Classroom Suite®, but .wav works in more web browsers and in all Windows applications. Caution: Audacity does not automatically add the correct extension.

Repeat this procedure for each separate phrase on your soundtrack. You'll soon have a new custom set of phrases, all matching in voice, speech rate, and volume, to use with any of your activities.

Useful Links

Post describing Audacity. Download a short tutorial and use a link to go to the Audacity download page. <http://www.annbrundigestudio.com/2008/07/05/more-audacity/>

Natural Reader site. Use the online application; the free download doesn't have the various voices. <http://www.naturalreaders.com/index.php>

Trans-Tex Software site, where you can download Tex-Edit Plus for Mac. <http://www.tex-edit.com/>