Making Music Lesson Plan

Amount of time Demo takes: 1-5 mins.
Try this at home!

Materials
- “Make your own music box” kit (Music box, sheets, hole punch)
- 1.75" x 18.75" ; 80lb paper (type of paper to make - refill music sheets)
- Sample sheet music
- Tape
- Set of 5 tuning forks

Set-up Instructions
1. If there are no saved music sheets, create a song by punching holes in one of the music sheets. Practice playing your song a couple of times.

SAFETY! Safe Demo!

Lesson’s Big Idea
- Music is vibrations that humans hear as a frequency, the faster the frequency, the higher the pitch.
- In this music box, the vibrations of the larger metal sections create the lower pitches and the smaller sections have higher pitches.
- The holes in the paper contact small spikes that cause the sections to vibrate. This causes a frequency to be released, that we hear as a pitch.
- All music is a frequency created by vibrations.

Background Information
- Frequency = speed/wavelength

Instructional Procedure
1. Take blank music sheet strip, punch holes on music sheet as shown below. Make sure to only punch holes on the cross sections. If you make a mistake, cover section with a small piece of tape.
2. Carefully insert paper with punched holes into music box as shown in the photo below:

3. Crank handle in a clockwise motion to turn the paper through and play music! Note: **DO NOT TRY TO PULL PAPER BACK OUT.** You MUST continue to crank (or pull) the paper through all the way, whether the whole sheet is being used or not.
Assessment/sample questions you can ask
1. Why do you think the larger sections create a lower pitch? [Answer: they cannot oscillate as fast, therefore have a longer wavelength, and a lower frequency (pitch)].

Clean Up
• Make sure to pack the music box carefully

References
• http://www.youtube.com/watch?v=mMgC74IqqIc
• http://science.howstuffworks.com/tuning-fork1.htm

Next Generation Science Standards
• K-5
  ○ 1-PS4-1
  ○ 4-PS4-3
• 6-8
  ○ MS-PS4-3