

Adapting to Different Grade Levels

There are a total of four central activities in this curriculum. While all may be adapted to various grade levels from K through 8, the activities were designed and tested with specific age ranges and developmental stages in mind:

- **All Ages:** *Balloon Drum*, the first activity, is fun as an introductory activity for all grade levels.
- **Primary Students (K-2):** Start with Activity 1, *Balloon Drum*, to introduce basic concepts to the students. *Good Vibrations*, the second activity, is a great station-based activity. *A Sound Balancing Act* is an optional activity for primary teachers looking for more depth or a math activity extension.
- **Intermediate Students (grades 3-5):** Start with Activity 1, *Balloon Drum*, to introduce basic concepts to the students. *Shake It, Break It*, the fourth activity, was designed to give intermediate students a model to understand the fragile nature of their ear. Models are often used by scientists to understand scientific phenomena. Intermediate students are able to understand the idea of models and to practice drawing conclusions from them. Intermediate students also need this tangible, three-dimensional representation to better understand what is happening inside the ear. Teachers looking for more depth or a mathematics extension may try *Sound Measures* as a guided classroom activity.
- **Middle School Students (grades 6-8):** Start with Activity 1, *Balloon Drum*, to introduce basic concepts to the students. The final two activities are designed for more depth with middle school students. *The Shapes of Sound* gives students an understanding of the physics of sound waves and vibrations, as well as practice observing and carrying out investigations. *Sound Measures* is a great foundation for further scientific inquiry. Students will gain enough experience and expertise to form new questions, design experiments, collect and analyze data, and draw conclusions and analysis. Both activities have applicable math components.