

Thunder Drum

P7-3100



BACKGROUND:

Thunder drums “thunder” when vibrations are transmitted through a drumhead and amplified in an open tube.

In the Big Thunder Drum, the vibrating spring causes the drumhead to vibrate. In the Mini, vibrations are caused by friction with the plastic string. The vibrating drumhead causes the air inside the tube to vibrate. The air in the tube begins to move, and the volume of the sound increases. Even a small vibration in the spring can grow into a large thundering sound.

The Big Thunder Drum has an angled head to increase the drumhead area. The larger drumhead creates a louder sound in the tube.

INSTRUCTIONS:

Basic Thunder: Hold the drum with the spring hanging toward the floor. Shake your hand, moving only the wrist (as if you were very nervous or shaking a drink). Do not whip the spring around! It will not improve the sound.

Modulated Thunder: Cover and uncover the open end of the drum to modulate the thunder sound. This is easier with the basic drum.

Creak: Scrape a fingernail along the spring while holding the drum still.

Knock: Tap the spring with a pencil.

Use a microphone to find the frequency distribution of the sound. Is it the same every time? Are there distinct overtones? How does this relate to the quality of the sound you hear?

RELATED PRODUCTS:

The **Space Phone** (P7-7150) uses a larger spring and cones to create sounds from vibrations. It also can create unusual sound effects.

Singing Rods (P7-7250) use friction to create standing longitudinal waves. Just hold them at one of the marked nodes and rub the rod with your fingers. The longitudinal vibrations result in a high-pitched ringing that is sure to wake up everyone in class!

