

# Day 7 Sound

Singing metal rods!!!

Three volunteers taught how to make a sound with metal rod that hurt a lot.

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Three short videos:

The Bottle Band (2 min.)

Ringling Rocks State Park (SE Pennsylvania)

Crocodile Dundee 2 (a bullroarer)

Hands on bullroarers (paint stick, corks & flat stick & rubber band & small index card)

# Day 7 Sound-Beat

- Beats shown with two tennis balls attached to sticks which are attached to hacksaw blades swinging separately. When they swung together they were showing a beat.
- If frequencies 450 hz and 453 hz are played together one can distinguish the difference in beats (thus 3 beats).

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- Clothes hanger hanging from two strings upside down with each string placed near each ear opening. When clothes hanging swung in solid object (like the desk) a strange sound is transmitted from hanger through string to your ear.

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- Hot sounds

Groups of five students took turns holding one of five long carpet tubes (each representing a different note) and played songs by holding their tube over a bunsen burner flame temporarily until the hot air rushing through the open pipe instrument played its note. Twinkle, Twinkle, Little Star; Happy Birthday, and God Bless America was played.

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- Last hands on activity

Each student took a different length set of beads and tried to get the different harmonics by just turning them in the air with their wrist by holding on end and twirling.