

STEM Day Lesson Plans December 1, 2016

**Standard: S1P1. Students will investigate sound.**

- c. Investigate how vibrations produce sound.
- d. Differentiate between various sounds in terms of (pitch) high or low and (volume) loud or soft.
- e. Identify emergency sounds and sounds that help us stay safe.

**Challenge Description:** Students will explore sound vibrations by creating a musical instrument using a variety of household materials. Students can create instruments that resemble and mimic percussion instruments, string instruments, or wind instruments. You may also choose to limit materials to only one family of instruments.

**Materials:** informational booklets about musical instruments and sound, paper towel/toilet paper rolls, straws, hole punchers, rubber bands, plastic cups, scotch tape, duct tape, dry beans or rice, pencils

- 8:30-9:00** Prime student's background knowledge about musical instruments and sounds by reading aloud an informational book of your choice. You may also choose to project a variety of Google images of musical instruments on an interactive whiteboard and discuss the similarities and differences.
- 9:00-9:20** Hold a class discussion, allowing students to share what they already know about sound and musical instruments and what questions they have about them. Record their ideas on an anchor chart and have the students record their idea in their individual booklets.
- 9:20-9:25** Restroom Break
- 9:25-9:55** Introduce permitted materials and share the challenge. Allow students to share ideas for how the materials work and might fit together in different ways to make sounds. Have students plan their musical designs on paper. Make sure that each child is ready for the next phase of the lesson.
- 9:55-10:40** Allow students at least 45 minutes to create and test a variety of designs, as well as record them in their STEM journals. (You may want to have the students work individually, with a partner, or in a group)
- 10:40-11:20** Lunch
- 11:20-11:30** Restroom
- 11:30-12:00** Hold a whole class closing discussion and reflection, allowing students to share what they created and what they learned about sound vibrations. Record their ideas on an anchor chart and allow them to finish their individual booklets.
- 12:00-12:30** The students will watch a Magic School bus episode on Sound.