

The 8th grade students were provided the following scenario along with the rules below:

*The Musicians for Science music company wants to expand their product line to make instructions for how to make your own musical instruments by upcycling materials. You are part of a team to experiment with different materials in order to design 2 possible instrument designs to present to the CEO of the company. The CEO wants the two instruments to sound uniquely different and to utilize at least 3 different construction materials.*

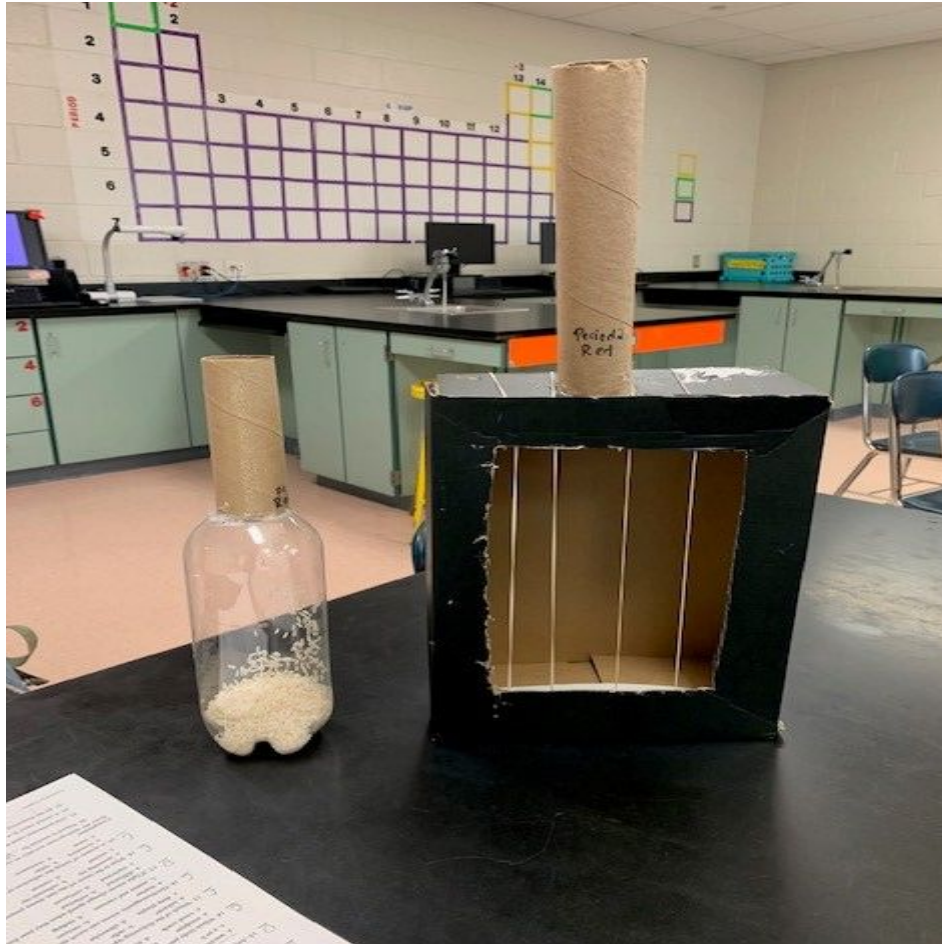
Rules:

- You must make at least 2 different instruments
- Each instrument must have a unique sound, distinct from one another.
- Each instrument must use at least 3 different building materials
- All materials need to be upcycled (things that had a former use, or would be recycled)
- You can not use any pre-made kits
- You can not use items that are already instruments

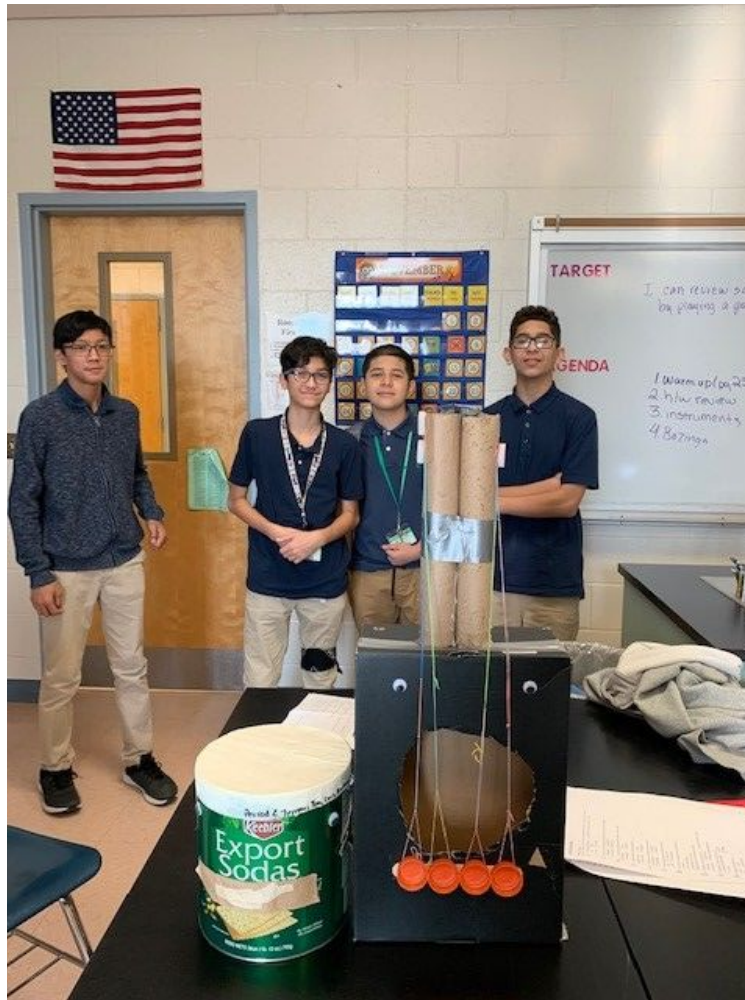
Students ended up creating instruments such as maracas, drums and guitars. Students also created original instruments.

This challenge covered the following:

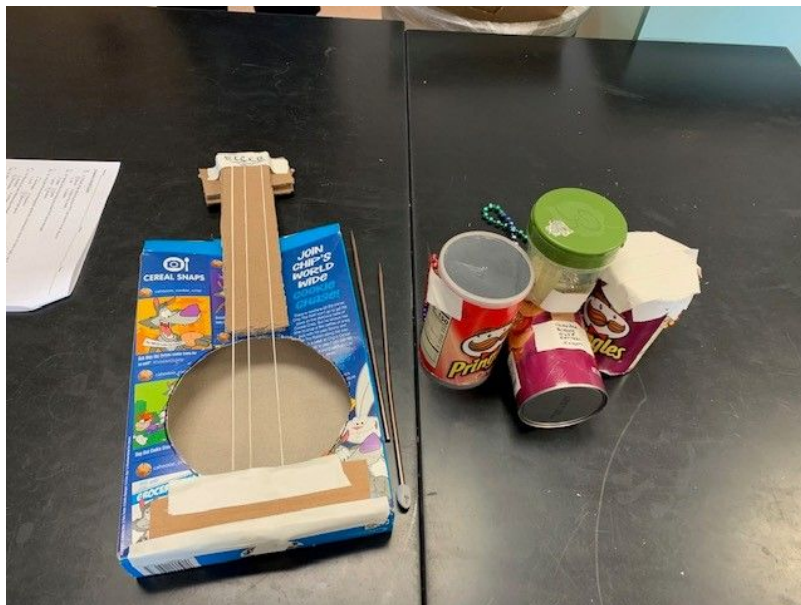
- NGSS standards PS4.2
- Disciplinary Core Idea: PS4.A Wave Properties
- Science and Engineering Practices: Developing and Using Models
- Crosscutting Concepts: Structure and Function.



Students created a maraca and a guitar from recycled items. The maraca was made from a water bottle, toilet paper roll and rice. The guitar was made from a shoe box, paper towel roll and rubber bands.



Students also made a drum from a cracker tin, paper and tape. They also created a guitar from a shoe box, two paper towel rolls, bottle caps and rubber bands.



The guitar was created by using a cereal box, cardboard and rubber bands. The drum set was made from various containers, beads and knitting needles.





