

## STEAM Activity

### Name of the activity

Creating a musical instrument.

### Target age

7-9 years old

### Motivation (context of the activity)

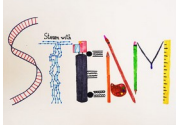
A thief broke into a Music Hall and stole all the instruments. Children would like to help the musicians and create new instruments using recycling materials.

### Goals (STEAM Skills developed by students through this activity)

- **Science:**  
Learning about the different sounds, inner ear structure, ecological problems of our planet, Dividing instruments into different groups
- **Technology:**  
Building of the instruments
- **Engineering:**  
Planning and designing the instruments
- **Art:**  
Painting, colouring the instruments
- **Mathematics:**  
Measuring sound intensity, distance among instruments, comparing sounds, putting sounds in order from the quietest ones to the loudest ones. ,

### Methodology (describe step by step how the activity has to be carried out by the students and how teachers have to present it)

1. Dividing students into groups and gathering materials by the students into to class for a week.
2. Teacher show the students different instruments groups.
3. Children create instruments in groups, checking which ones are loud and quiet.
4. Measuring the sounds with decibels using phone app and distance from the instrument they hear
5. Students perform using the instruments they made.



**Materials** (list all materials and resources needed to carry out the activity)

All kind of recycling materials children can bring to class: plastic bags, straws, papers, newspapers, plastic cups, threads, boxes, glue, scissors, hair band, rubber band, plastic foil, bottles. Toilet rolls, crayons, paints, etc.

**Challenging questions** (list the questions that help students to move forward and to reflect on what they are doing)

1. What kind of instruments do you know?
2. What are the methods to measure sound?
3. What is the sound unit?
4. What are the length units ?
5. What kind of instrument can you build from the given material?
6. How can you beautify the instruments?

**Assessment** (survey / questions for the students to evaluate if the objectives of the activity have been achieved)

1. What should you do to produce sound?
2. How far can you stand in order to hear the instrument?

**Results** (photos and videos)

**Related links** (support materials for the activity: documents, pictures, videos, tutorials, etc.)