



BotSTEM – Erasms+ KA2 Project

2017-1-ES01-KA201-038204

Good practice template

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| 1. Title of the activity / practice | Listen and produce sounds |
| 2. Origin of the activity | <p>This sequence was experimented by Marie-Claude Vallet in second year and accompanied a broader project: the children had written a play that they had to musicalize by creating musical ambiances with various sound bodies. The programs do not mention the study of sound.</p> <p>Each session is organized around the experimentation in small groups and allows to implement the transversal activities of control of the language, each pupil having to give his opinion and to defend it in front of his comrades. The study of the variation of the parameters which modify a sound, and the difficulty of isolating them, is also part of the debates during the sessions.</p> |
| 3. Age of the students | 6-8 |
| 4. Target group (type of the learners, size of the group) | General curriculum Small group of 2 -3 |
| 5. School subjects + topics concerned | Art (Music); physics; technology |
| 6. Educational goals of the practice | <p>Listen and produce sounds in order to characterize them. Hearing Acuity : height and timbre of a sound. Realize that changing a parameter in the instrument construction alters the sound obtained.</p> <p>Realize that sound is due to vibrations, and that it spreads in the air but also in various materials.</p> |
| 7. Duration | 120 min |
| 8. Place | Classroom / at home, etc. |



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| <p>9. Short description of the activity</p> | <p>Session 1- Listen, produce sounds; locate features Listen and identify the sounds heard. Produce sounds with what's in the class, qualify them. Identify what causes the sound.</p> <p>Session 2 - Listen to sounds; identify them, compare them. Identify the sounds of soundtracks; locate, from a set of small boxes, the two boxes that produce the same sound. Distinguish between bass voice, soprano voice ...</p> <p>Session 3 - Finding Vibrations Associated with Sounds, Becoming Familiar with Sound Production Produce sounds that cause vibrations in the cheeks, on the skull, in the throat, more or less high in the chest, in the lips. Discussion on the sounds produced. Make a doggie.</p> <p>Session 4 - Exploring Vibrations The students are divided into 4 different workshops: tuning fork; drums, stringed instrument, resonances.</p> <p>Session 5 - Comparing the pitch of sounds, first approach Store drums according to the height of the sound produced. Produce sounds of different heights with the elastics stretched between the golf tees placed in the holes of the board</p> <p>Session 7 - Sound Volume and Amplification Voice, sound of the tuning fork or elastic pinch: how to amplify the sound?</p> <p>Session 8 - The Sound Detector Ear Observe the diagram of an ear studying its operation. Documenting noise pollution.</p> <p>Session 9 - Air and other vibration transmitter materials Telephone, sound transmission games ... Make the acoustic properties of materials.</p> <p>Session 10- What did we learn? At first, the children respond individually on their experience book. In pairs, they compare their answers, and try to agree on a response</p> |
| <p>10. Evaluation</p> | <p>Questions, Discussions, Rubric for group work, , teacher's observation</p> |



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| <p>11. Materials / Resources / technical requirements</p> | <p>Material: Tape Recorder</p> <ul style="list-style-type: none"> - Soundtrack "noises" made with various sounds: broken glass, accidents, thunderstorms (media libraries have this kind of recording) - Soundtrack "voice" where are recorded "voices" of animals: various birds (owls, nightingales), deer slabs, whale songs, roars, as well as various voices and extracts of opera. - Boxes of opaque film or opaque bags and closed containing: desbilles, semolina, rice, ground coffee, beans, chickpeas, sand, pins, dry beans cereals, nails, 'water <p>Rolls of toilet paper pierced with a hole at a third of their height; parchment paper of sufficient size to cover</p> <p>Tuning fork (at least 1, plus if possible), a container with water</p> <ul style="list-style-type: none"> - tin cans with 2 lids removed (2 per group), balloons or latex gloves, rubber bands. <p>a board pierced by group (23x38cm) pierced with 4 rows of holes for being able to move golf tees), golf tees; Tin + drum skin (balloon or latex glove, sand, a real drum with vibrating mallet imposes its vibration on the membrane of the other drum.</p> <p>Material by group:</p> <ul style="list-style-type: none"> - 3 cans of the same size - 3 balloons or latex household gloves - 3 rubber bands of the same size - 1 breakthrough board with 6 golf tees <p>Material: boxes + elastics, plastic combs, tuning fork</p> <p>A room of ten meters or a gymnasium</p> <ul style="list-style-type: none"> - Different materials: wooden board, door or metal tube, concrete floor, plastic, brick. - Phones made from cardboard cups and strings of different sizes and materials. |
| <p>12. Tips for educators / theoretical background (if applicable) or curriculum context</p> | <p>Source URL: http://www.fondation-lamap.org/fr/page/11125/ecouter-et-produire-des-sons</p> <p>This material is included in La main a la pate project</p> |