

Overview

Learners will use the [Gabon e-book](#) as a context for the suggested learning opportunities.

With a focus on sciences and technologies learners will use internet search engines and other sources to research and investigate musical traditions in Gabon, especially traditional instruments. This will lead on to an opportunity to investigate music, with an emphasis on sound production. Learners will be given the opportunity to design and construct their own instrument, inspired by those of Gabon. Playing their instrument will give learner an opportunity to explore and explain the way that sound is produced and travels, for example, by altering the size of the drum the difference in pitch can be investigated.

Through using a [challenge](#) learners will be encouraged to negotiate their own success criteria and use this to evaluate the process of designing, making and playing their instrument. Practitioners may wish to use the [additional support materials](#) when exploring this challenge.

These learning opportunities promote links with [expressive arts](#) and there are opportunities to link with the [STEM Central learning materials on the context of sound](#).



Sciences / technologies experiences and outcomes explored:

By collaborating in experiments on different ways of producing sound from vibrations, I can demonstrate how to change the pitch of the sound.

SCN 1-11a

Through research on how animals communicate, I can explain how sound vibrations are carried by waves through air, water and other media.

CN 2-11a

By applying my knowledge and skills of science and mathematics, I can engineer 3D objects which demonstrate strengthening, energy transfer and movement.

TCH 2-12a

Having evaluated my work, I can adapt and improve, where appropriate, through trial and error or by using feedback.

TCH 2-14b

Other curriculum areas explored:

I can use my voice, musical instruments and music technology to discover and enjoy playing with sound, rhythm, pitch and dynamics.

EXA 1-17a

Responsibility of all:

I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems. **MNU 2-11b**

Themes across learning:

Creativity
Global citizenship

Overview of learning

Possible prior experiences

Watch the [Gabon e-book](#).

Making an instrument and describing how it makes sound.

Have had the opportunity to research traditional instruments and hear them being played.

Explored the musical traditions and be able to identify and name some instruments.

Challenge

Learners may use [the challenge](#) to investigate traditional instruments of Gabon and design and make their own.

As a class learners could:

Devise a list of success criteria for the instrument, for example:

- It produces sound
- The pitch of the instrument can be varied in some way
- Suitable materials that could be used
- Use decorative techniques and patterns to complete the instrument

Within their groups learners could:

- Design their instrument and include measurements
- Construct their instrument using an agreed range of materials
- Use a traditional pattern as a stimulus when decorating their instrument
- Decide how the instrument could be played as part of a performance

Learners could devise questions to help decide how effective their design is, for example:

- Does it fulfil the success criteria?
- Can it be played successfully?
- How does it resemble Gabonese instruments?
- Can the pitch of the instrument be changed?
- Could it be improved in any way?

After peer and self assessment pupils should have the opportunity to reflect and suggest improvements to their instrument/performance.

Possible evidence

Observation notes

Research into traditional instruments and music

Designs for an instrument inspired by research

Success criteria checklist

Photographs/video of the process

Performance in front of an audience using the instruments

Record the performance and review it

Evaluation sheets

Demonstrate an understanding of pitch using the instrument produced

Be able to explain how sound is made and travels through solids, liquids and gases