## Developing algebraic thinking using Musical instruments

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Before starting to recognise the regularities in numerical sequences (ascending or descending), the student must be able to recognise the irregularities in the repetitive sequences.

Even though the student can use a variety of forms and colours to create his/her repetitive sequences, the use of musical instruments allows them to use their sense of hearing and touch, therefore providing various modes of
 representations.

For example, a sequence like A-A-B-C could have the following repetitive part:
tambourine - tambourine - bells - maracas.

The students can even work collaboratively, each being responsible for one musical instrument.
An important ability is to also be able to recognise the attributes and characteristics that form the repetitive part of a sequence and to convert it to another mode. For example, the students could recognise that this sequence is composed of a repetitive part of type A-A-B for the "form" attribute,

and convert it into sounds with the musical instruments:
bells - bells - tambourine - bells - bells - tambourine - bells - bells - tambourine

Finally, we could form an orchestra of student groups that make audible sequences containing different repetitive parts, but that, once played together, form a pleasant melody.

