

Making a string instrument

Outstanding Science Year 4 - Sound - OS4D004

National Curriculum Statutory Requirements

4D3 - find patterns between the pitch of a sound and features of the object that produced it

Learning Objective

I can make a tuned string instrument.



Me: ☹️ ☹️ ☹️

Teacher: ☹️ ☹️ ☹️

Scientific play

Get hold of a guitar. Pluck one of the strings. Carefully turn its tuning peg. Pluck the string again. How has the sound changed? Why?



Making a string instrument

It's easy to make your own string instrument. You can tune the strings so that they each sound at a different pitch.

You will need:

- An ice cream tub (you don't need the lid)
- Identical rubber bands (big enough to fit around the tub, 1 for each string)
- About 20 Lego bricks

Method

Make 'tuners' out of the Lego bricks (Fig. 1). Place them on the back of the ice cream tub. Wrap the bands around them - the bands will hold them in place. Spread the strings out so that there is an equal space between them.

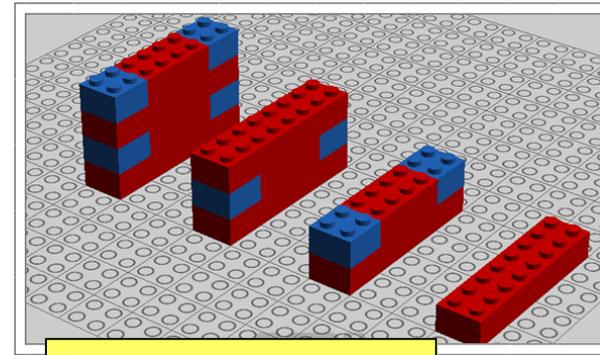


Figure 1 - the Lego tuners

Tuning your instrument

Tune your instrument by adding or removing Lego bricks from the tuners. Make sure that each string has a different **pitch**.

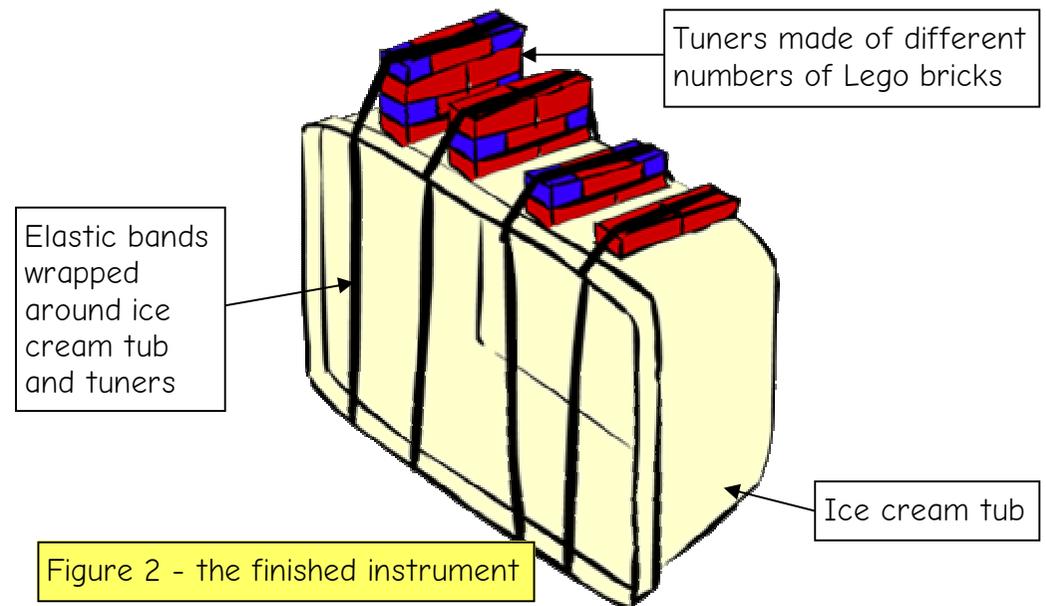


Figure 2 - the finished instrument

Discussion

Can you explain how your string instrument works?
Why do the strings sound at different pitches?
Can you change the volume (loudness) of each string? How?
Can you play a tune on your instrument?