World's Fastest Clapper

Mathematics - Rates

Here's a quirky little activity that uses the DER laptops.

I've been using this video of the world's fastest clapper to engage the students at the start of a lesson about rates.

YouTube - Kent "Toast" French, The World's Fastest Clapper: **http://www.youtube.com/watch?v=PNXElmEUIJo**

As I'm teaching lessons, and knowing the laptops will hit our school soon, I've been trying to think about how I can include the laptops in existing lessons.

First up, this fits into the NSW Syllabus:

> NS4.3 Operates with fractions, decimals, percentages, ratios and rates
>
> - Students learn about calculating rates from given information
> - Students learn to solve a variety of real-life problems involving rates

Whilst Year 9 are the recipients of the laptops (technically Stage 5) , we review ratio and rates (Stage 4) in Year 10.

Back to the video. Kent "Toast" French claims in the video that he hits 14 claps per second. How can we check? We can't count it.

I used a Mac application called **Audio Hijack Pro** to extract the audio of the video into an MP3 file. There might be a way to extract the audio on the DER laptop, but I haven't investigated.

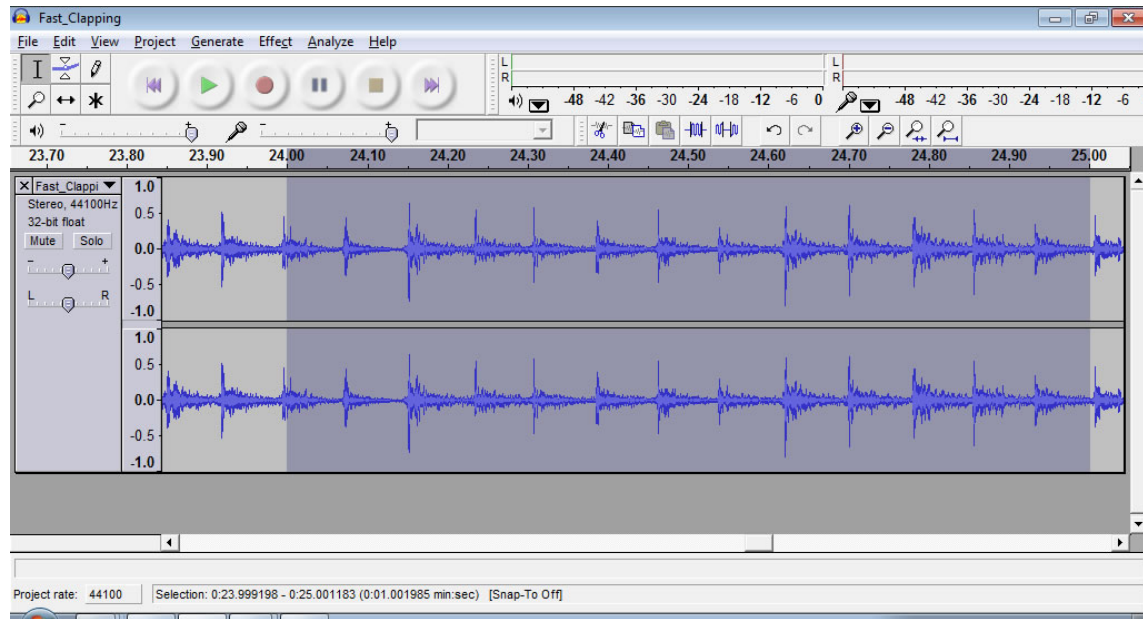See **Web links** for a link to the **Fast Clapping MP3** (345 KB).

When you load this MP3 file into **Audacity** you see the waveform.
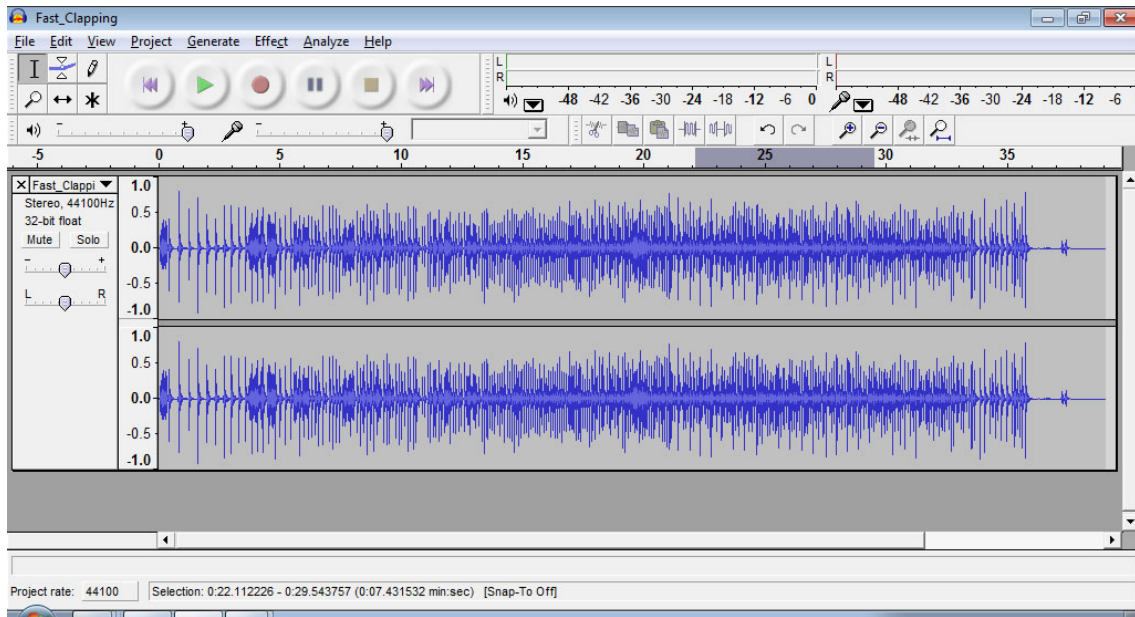
But to measure you'll need to zoom in to the waveform after Kent says "one more gear".
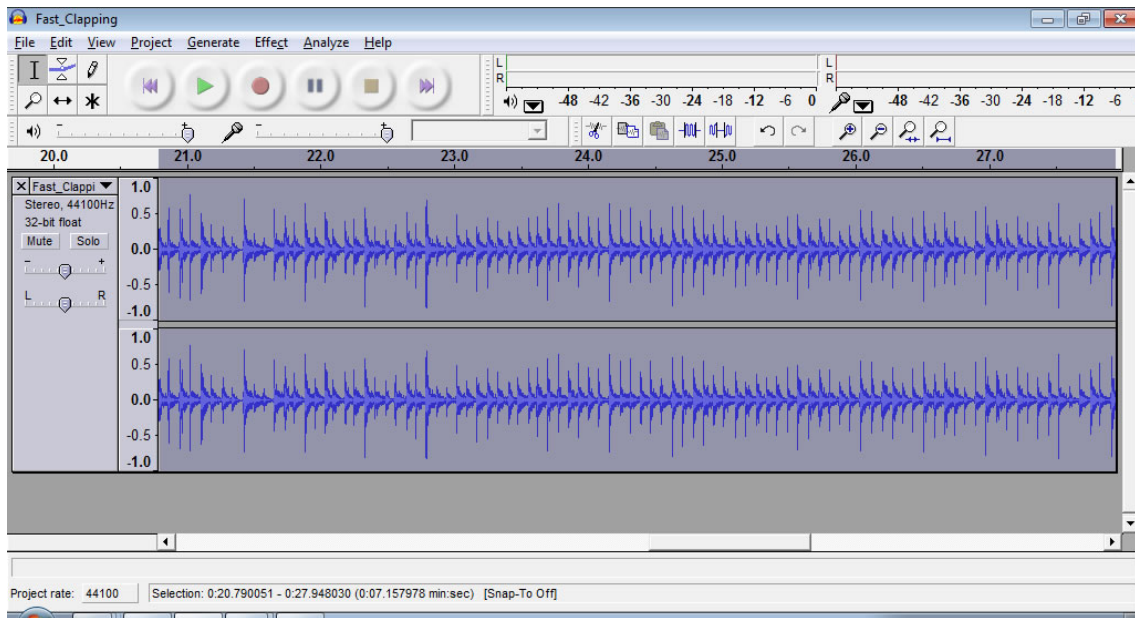
Now you can start to see the individual claps. To measure you can zoom in further to see a second.

From that, I'd say Kent reached 13 claps per second (in the selection I made).

Taking this further:

- get the students to record their own fast clapping straight into Audacity and measure
- you could mark 100m on the road outside your school, and video cars going by. Back in the classroom, you could work out the speed by analysing using Adobe Premiere Elements.

Web links:

- Original post on MathsClass blog: **http://mathsclass.net/comments/worlds-fastest-clapper/** - includes the Fast Clapping MP3 file.
- YouTube - Kent "Toast" French, The World's Fastest Clapper: **http://www.youtube.com/watch?v=PNXElmEUIJo**
- Audio Hijack Pro: **http://www.rogueamoeba.com/audiohijackpro/**