Electronic music

Did you know?

Electricity does more than get the power to your speakers – it can also create or "synthesise" the sounds that come out of them. The first electronic devices for producing music were developed over 100 years ago. In the early days, it would take weeks to create just a few minutes of music. Now we can synthesise music in milliseconds.

Science scene-setter

Electronic synthesisers create the sounds of instruments by mimicking sound waves – waves of energy travelling to our ears. Two key features affect the types of sounds we hear: the frequency of the wave (how many times the wave vibrates in one second) and the amplitude (how high and low it goes). Frequency is associated with the pitch, while amplitude is associated with volume. A synthesiser can vary all of these factors to produce different sounds. They are usually worked by instrument controllers like a keyboard or electronic drum pads.

Put it to the test

Find out how to make music with electronic synthesisers and create a new soundtrack for one of our animations.

Energise Anything!

e·on

Key activity steps

1 Research

Listen to some different types of electronic music.

- Find out about the different types of electronic music
- Think about which you like and which you don't.

2 Design

Explore how to make electronic music using online software.

- Watch how the sound waves vary as you try different instruments, rhythms and pitches.

3 Test

Watch your favourite of our animations, with the sound off and the sound on. You may need to do this more than once. Find the animations at: eonenergy.com/secondaryathome

- Think about what kind of music would work well with the animation
- Create and edit your own soundtrack using free online software.

Interested in this? You could be...

- A sound or audio engineer – work with the technical aspects of sound during recording, mixing and reproduction of music in studios or live music shows
- An electrical engineer – design and develop new electrical equipment, solve problems and test equipment
- A software engineer – use engineering principles to design, develop, test and maintain software systems.

Visit our careers page to see where a love for science could take you: **eonenergy.com/stickwithstem**

Equipment and resources

- ☑ A laptop or desktop to create your own music, with a sound chip and speakers
- ☑ Different types of electronic music with lots of examples: techno.org/electronic-music-guide/
- ☑ A guide to making electronic music: wikihow.com/Make-Electronic-Music
- ☑ Free online software to make music (with lots of tutorials to get started): audiotool.com/app
- ☑ Free downloadable software to record and edit music; also allows you to see the sound waves: audacityteam.org

E.ON's Energise Anything has already engaged over 25,000 young people. We asked some of their teachers to describe it in three words. Here's what they said most often!