

Music Archaeology: From the Stone Age to Roman Times

Home learning guide

40,000 years ago, people in Europe started to paint pictures and make music in caves. By 2,000 years ago, the Romans had theatres for performances and musical groups. This set of home learning worksheets helps children to explore our ancestors' music and art.

These activities are based on the **EMAP Soundgate** app for tablet and smartphone, which can be downloaded free from the EMAP website here: <http://www.emaproject.eu/content/soundgate-app.html>



We recommend that you download and spend some time exploring the app before getting started on the activities in this document.

Following simple instructions, you will use our Soundgate App to virtually explore archaeological sites, and hear music and sounds from the past. You might also create your own cave with cave paintings, walk around Stonehenge, build your own stone circle, or find out more about concerts in Roman times.

We would love to hear about your Music Archaeology home learning activities – please do email pictures, videos, and feedback to r.till@hud.ac.uk or tweet a picture of your cave / bullroarer / cave paintings to **@RupertTill** using the hashtag **#soundgate**

This pack is aimed at home learning for 7-11 year-old children, with adults helping them.

It has been adapted from an existing resource pack for Key Stage 2 teachers, supporting learning in History, Music, Drama, and Science. For more detailed information, you can download the Music Archaeology Key Stage 2 Education Pack for schools from <https://mhm.hud.ac.uk/soundgate/>.

Technical guide

Devices

The EMAP Soundgate app is designed to work on a range of devices, from PC and Mac computers to iPads and Android tablets, as well as smart phones.

Using the app

As sound is a key part of the app, children may want to use headphones. You can watch a video exploring the app here:

<https://www.youtube.com/watch?v=7Xmwu76TGo0&t=3s>

Instructions for using the app are given below.

Navigation

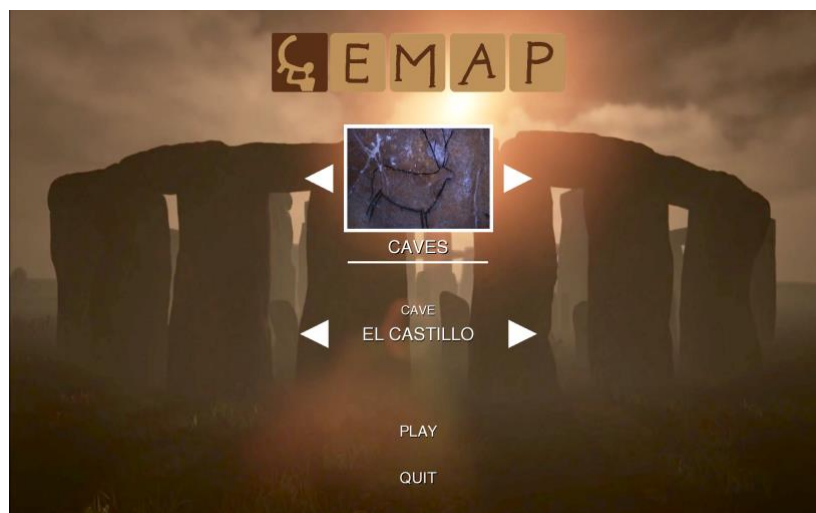
Children will be very familiar with the game style navigation in the app environments. On tablets or touch screens you simply tap the screen to go to a selected point, or pinch and drag. Press the icons to play sounds or return to the menu.

On a PC or Mac:

- to move around you can use an Xbox controller, the W, A, S, D keys, or the arrow keys
- number buttons trigger sounds
- the mouse or trackpad allow you to look around
- space bar lets you jump.

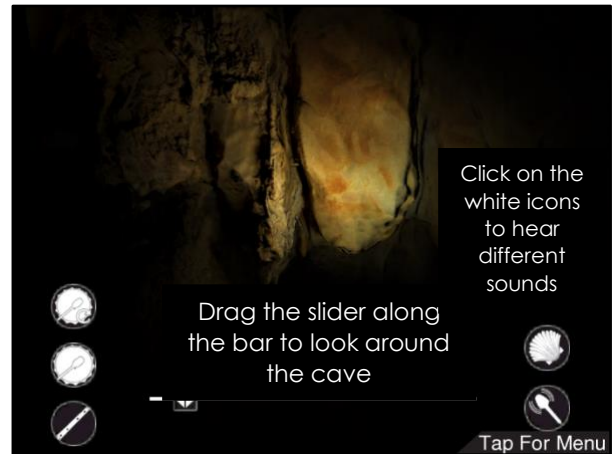
When you first launch the app, you will arrive on the main menu navigation page, where you can select one of the three main archaeological sites – the image outlined with a white box is the site currently selected. The options below the small picture differ according to which site you've selected. To start with it will show the Caves, and you can select which cave to visit using arrows.

When you tap **Play** there will be a small pause and then you should see the **Loading** message. You will arrive in a model of the ancient landscape you have selected, either a cave, Stonehenge, or Paphos Theatre, with accompanying sounds.



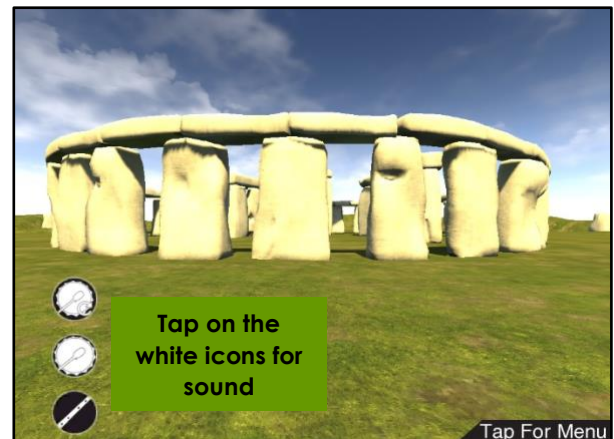
Caves

1. **Select** different caves by tapping or clicking **arrow** keys, for example to see El Castillo or La Garma.
2. When you press **Play** the screen on the right will appear.



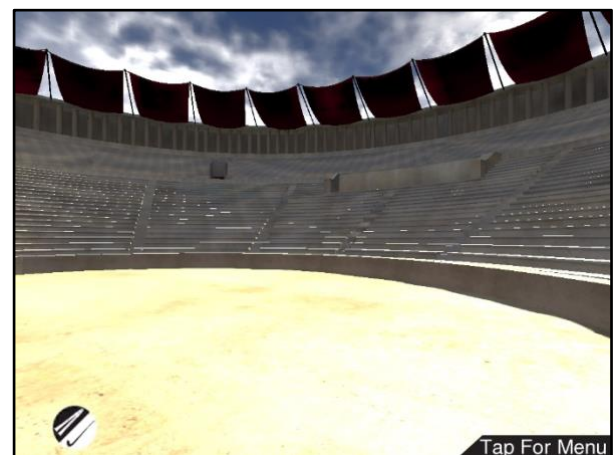
Stonehenge

1. Select the **Era** and **Time of Day** using the arrows/arrow keys then tap/click **Play**.
2. Tap the screen to move or drag your finger around the screen to look around. On a PC use the arrow keys and mouse, touchpad, or W, A, S, & D.



Paphos

1. Select Paphos instead of Stonehenge or Caves. Hit **Play**. Navigate around as you did in Stonehenge.
2. Play sounds with the picture of Aulos or Lituus in the bottom left corner, or on a computer by using numbers 1 and 2.
3. You may need to jump using the space bar to get around Paphos when using a computer.



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Worksheet 1: Making Cave Art

What you'll need

- To download the EMAP Soundgate app
- Paper, paint, sticky tape, drinking straws a plastic or paper cup, and scissors
- Something to protect your floor, like newspapers or plastic sheets
- Emap Soundgate App

Activities

Let's make our own Cave Art, like people did 40,000 years ago. Why might people of this time have wanted to create pictures in their caves, and what would these pictures be of, maybe themselves, animals, or something else? First, open **the EMAP Soundgate app** cave section and explore the cave paintings you find there. How many different types of images did they make.

You could do some research into raw materials that might have been useful for creating art in a cave. You could think about rocks, bones, fruit, and minerals. For more information refer to the Ancient Craft website in the **Useful Links section**.

You can create hand stencils for your caves by painting on fabric or paper using an airbrush made from two bits of a straw - this video clip https://youtu.be/6HR6bh_ocNE shows more clearly how this works. It can take a bit of practice and an adult's help, and you'll want to protect the floor from paint drips using newspaper.

Put a drinking straw into the cup so one end touches the bottom, and cut the straw with scissors, just a bit above the top of the cup. Cut a small V shape in the bottom of the vertical piece of straw. Pour some paint into the cup (or into a pot or plastic bottle), and add water if you need to (be careful what kind of paint you use, water soluble is good). Tape the piece of straw in the paint to the cup to hold it in place if that helps. Someone else lay a hand on the fabric or paper - keep it still. Use the other piece of straw to blow **hard** across the top of the straw which is in the paint. This will spray the paint. Try some different colours. You can also make simple hand prints and look at the difference.

Extra info

Listen carefully to the sound which is made when you are blowing the paint. We know this technique was used in prehistoric caves, perhaps using the same bones used to make flutes. More info in **Useful links**.

You might want to try some of the other things you will find in the **Useful links** section, perhaps draw dots, lines, or animals. When the paint is dry, put up the paintings, turn off all the lights and using a torch, show your cave art to someone else in their household.

You could produce a short video guide to your cave art, explaining what we can see, why you think these kinds of images were made in caves, and how you made them. Or you could take photos of your paintings, print them out and write about them. You could put this online, maybe on your school's website, and please send copies to us.

Useful links

How to make a spray gun

https://youtu.be/6HR6bh_ocNE and <https://youtu.be/OT2G4XSvo3Y>

BBC Hands on History – Cave Art – PDF

http://downloads.bbc.co.uk/history/handsonhistory/ancients_art.pdf

Ancient Craft – Stone-age art

www.ancientcraft.co.uk/Archaeology/stone-age/stoneage_art.html

Worksheet 2: Making Cave Sounds and Music

What you'll need

- EMAP Soundgate app
- Firm cardboard or a ruler
- String and scissors
- A recording app on a tablet or a voice memo app on a phone
- Songs of the Caves video (see **Useful Links**)

Activities

Using the **EMAP Soundgate app**, have a listen to the different sounds you can hear in the different caves. How would you have made these sounds, what would you need to make them? Maybe you could make a list.

Watch a video about music and sound in ancient times here:

<https://vimeo.com/217026586>

You might have heard the sound of a Bullroarer in the app. You can one from cardboard (see https://youtu.be/7pcqd30_lFo) or out of a ruler (<https://youtu.be/jLUkuYMH13M>). You could also use a rectangular strip of wood from a DIY store, or a piece of modelling balsa wood.

Simple musical pipes made out of 10,000-40,000 year-old bird and mammoth bones have been found in caves. You can make a straw flute that is quite similar to these instruments, using the following videos: <https://youtu.be/iHFPRE1UTnl> and <https://youtu.be/24f1kt8RMaY>

You can listen to Anna Friederike Potengowski beautifully playing musical bone pipes on her album called **Edge of Time** on Spotify, Apple Music or Amazon. You can also hear these pipes in the app, all the sounds in the cave section were actually recorded on site in each cave. You could watch the **Songs of the Caves** film too.

Perhaps you can find or make some extra instruments or sounds from things you can find inside or outside the house – try using sticks, stones, recorders, drums, shakers, or voices. Try out some sounds using your bullroarers and straw pipes, along with any other instruments, and make up some music for inside a cave (perhaps for the cave you will build as part of the next worksheet). Is there a room in your house that sounds a bit more like a cave? Maybe the bathroom or cellar? Maybe you could record your music in there.

You can use an iPad, tablet, or phone, to record or video the cave sounds. You could share the recording with other people, or send it to us so we can hear it.

Useful links

Songs of the Caves – short film

<https://youtu.be/oLN4Th3p5JY>

Definition of a bullroarer

<https://en.wikipedia.org/wiki/Bullroarer>

New York Times – Bone flutes - HTML

www.nytimes.com/2009/06/25/science/25flute.html?mcubz=3

Making a Musical Bone Pipe

<https://vimeo.com/217026586>

Worksheet 3: Creating a Cave

What you'll need

- Fabric, curtains, paper, or newspaper
- A table
- EMAP Soundgate app

Activities

What would be good or bad about living in a cave; was it safe or dangerous, dry or wet, warm or cold? What about water supplies and light?

Can you create a cave at home? You could do this by throwing material or curtains over a table, or by pinning up paper or newspaper on windows and doors to make the room dark; perhaps you have a room or space with not many windows in the house you could use? You just have to block any light from coming in. You can decorate the walls of your cave with your pictures, and with anything else you want to use to make it special to you. What else would you want in your cave?

When you have created your cave, try sitting quietly in it for a few minutes. Set a timer going before you go inside, and see how long you can stay in there. When you come out, guess how long you had been in there, and see if you are close. What did you **see?** what did you **hear?** How did you **feel?** To help, you can refer to the **Get into the minds of Ancient Britons** sheet (see Useful Links, below). Maybe you could try playing the recordings of music and sound you made, or playing your musical instruments, while in your cave.

Open the **EMAP Soundgate app** section on 'Caves' and 'Las Chimeneas'. Try exploring this cave, using the slider at the bottom of the screen to navigate.

What is different between your home cave and the real caves shown in the Soundgate app? Think about what you can hear – natural sounds, acoustics, and music maybe – as well as what it's made of, how much light there is, and what it looks like. How would you live here? Think about cooking, eating, sleeping and talking. Try to write down your ideas.

Imagine you are a cave dweller living 30,000 years ago. Write a short diary entry of a day in your life. Write about what you see, hear and feel, as well as what you do. Try to make sure the people reading it will understand about what it looks **and** sounds like in the quiet, dark interior of a cave.

Useful links

BBC Hands on History – Get into the minds of Ancient Britons – PDF

www.bbc.co.uk/history/handsonhistory/ancient-britain.shtml

Songs of the Caves Short Film

<https://www.youtube.com/watch?v=oLN4Th3p5JY>

How Did Hunter Gatherers Live?

<https://www.bbc.co.uk/bitesize/topics/z82hsbk/articles/z34djxs>

The Oldest Cave Paintings in the World

<https://www.smithsonianmag.com/history/journey-oldest-cave-paintings-world-180957685/>

Cave Art

<https://www.youtube.com/watch?v=ZjejoT1gFOc>

Worksheet 4: Stonehenge

What you'll need

- EMAP Soundgate
- Wooden blocks, stones or clay

Activities

Look at a timeline of Ancient Britain (see **Useful Links** section) to introduce the idea of historical eras and concepts of BC/AD.

Using the **EMAP Soundgate app**, explore what it might have been like to be at Stonehenge in the past. Write down what you notice about looking **and** listening to Stonehenge in different eras. Check out the different stone shapes, and how it is at different times of day? Tap the white symbols on the screen to hear sounds from various instruments – what do you notice? How does it make you feel? What can you hear?

We think that people went to Stonehenge 5,000 years ago to celebrate the longest day of the year, the summer solstice, and people still do this now. Try to find out why people developed rituals and celebrations there. What sort of thing might they have celebrated and how? What are the differences between the winter and summer solstices? See the information in **Useful Links** to find out about lots of different prehistoric sites.

Why not make your own version of Stonehenge, using stones you have gathered or created from clay, or wooden blocks. There is a simple guide in the **Useful Links** section.

Maybe you could write about **how** music might have sounded in the pre-historic era and **why** these changes occurred. Focus on different types of place, like caves, or Stonehenge and what materials and tools were used to create instruments, as well as **why** people made music. You could even create your own ritual to mark the solstice or equinox.

Useful links

BBC Stonehenge Files

http://downloads.bbc.co.uk/history/handsonhistory/ancients_timeline.pdf

<https://www.bbc.co.uk/bitesize/articles/zr2djhv>

Build your own Stone Circle

http://downloads.bbc.co.uk/history/handsonhistory/ancients_circle.pdf

History of Stonehenge

<https://www.english-heritage.org.uk/visit/places/stonehenge/history-and-stories/history/>

<https://www.english-heritage.org.uk/visit/places/stonehenge/>

Video Simulation of Stonehenge Resurrected

<https://www.youtube.com/watch?v=iiGzNGlnYJ4>

Lists of Other Prehistoric Sites

<https://www.wanderlust.co.uk/content/12-ancient-sites-great-britain/>

https://www.megalithic.co.uk/asb_mapsquare.php

<http://www.stone-circles.org.uk/stone/>

<https://museumcrush.org/britains-best-places-to-see-standing-stones-and-prehistoric-monuments/>

Worksheet 5: Paphos – Roman amphitheatre

What you'll need

- EMAP Soundgate app
- Video material from the **Useful Links** section

Activities

Paphos Theatre was first built on the island of Cyprus by the Greeks in 300BC, and was then used and rebuilt by the Romans. Looking at the BBC Hands on History timeline in the **Useful Links** section, have a look at where Romans are in the timeline, moving from Stonehenge to the Paphos Theatre in Cyprus. The version modelled in the EMAP Soundgate app is dated between 139AD, and is based on archaeological work by Sydney University.

Open the **EMAP Soundgate app** and access the Paphos Theatre section. Listen carefully as you move around the theatre, and notice the sounds and instruments they you can hear. How are these sounds and instruments different to the ones in the caves or at Stonehenge, in terms of what they sound like and how they are played?

You could investigate what Roman instruments looked like and sounded like in more detail, using some of the sources listed in the **Useful Links** section.

How would people have experienced the music in such a place? What were instruments made of? Can you hear reverberation, the sound of the building?

You could write a story about going to a performance at Paphos Theatre in Cyprus. Using your research on musical instruments and sounds, you can try to describe what you might see and hear, and how it looks and feels to be in the theatre. How many people would be there, and would it seem different if you were at the back or the front? Where's the best place to sit?

Extra info

The theatre is near the sea, and if children listen carefully they might hear waves in the distance, along with the wind fluttering in the material of the theatre's canopy and curtains, and perhaps some seagulls. Pupils might also hear pigeons and doves, birds we know the Romans used to eat, as well as local birds the Cyprus Warbler and Cyprus Wheatear.

Useful links

BBC Hands on History Timeline

http://downloads.bbc.co.uk/history/handsonhistory/ancients_timeline.pdf

History of Paphos Theatre

<http://www.paphostheatre.org/archaeological-history.html>

Greek and Roman Musical Instruments

Aulos - <https://vimeo.com/217027429>

Lituus - <https://youtu.be/jQm6-uoqS8Q>

Roman Music

<https://www.bbc.co.uk/teach/school-radio/music-ks2-romans-index/zdfk92p>

Blasts from the past – an hour-long documentary film

https://youtu.be/mF2LpQA_jtQ

Music Archaeology Recordings – Listen to ancient instruments

<https://musicarchaeologyrecordings.wordpress.com/>