



Earth Echoes: A Song of Stones

Script

The Rock Connects Us

Earth Echoes was performed in front of 700 international delegates, a global audience via the live streaming and 500 members of the community from the English Riviera UNESCO Global Geopark; on 27th September 2016 – the performance marked the opening of the 7th International Conference on UNESCO Global Geoparks.

Geology brought together a diverse group of people and organisations to enable the creation and performance of Earth Echoes. Professional musicians and arts organisations, a local authority, a team of professional artists across a range of disciplines, a group of young composers, the English Riviera UNESCO Global Geopark and, most significantly, a large cross generational group of people, 8 to 80 years old from the local community.

The Rock Connects us.....

Like geology, in many ways for the participants and performers, the creative process, the process over time of making Earth Echoes, is as important, if not more important, than the thing that has been made, this performance that we offer. Within that journey, people have changed. Confidence has grown, layer by layer over time. Friendships were made, minds broadened, new knowledge gained. Human beings who once were strangers across the generations talked, played and shared together. Lives have been changed, for some in the tiniest way, for some in enormous as yet unfathomable ways. These things are significant.

And now, the Rock Connects us again.....

We offer you this unique collection of Earth Echoes materials in a spirit of sharing and with the certain knowledge that at this time in the world there is more that connects us together than the numerous things which too easily seem to separate us. We hope you enjoy our offer. Only time will tell.

The Rock Connects us....

We hope our collection of materials inspire you in your own journeys of discovery.

You will find the rest of the materials including:

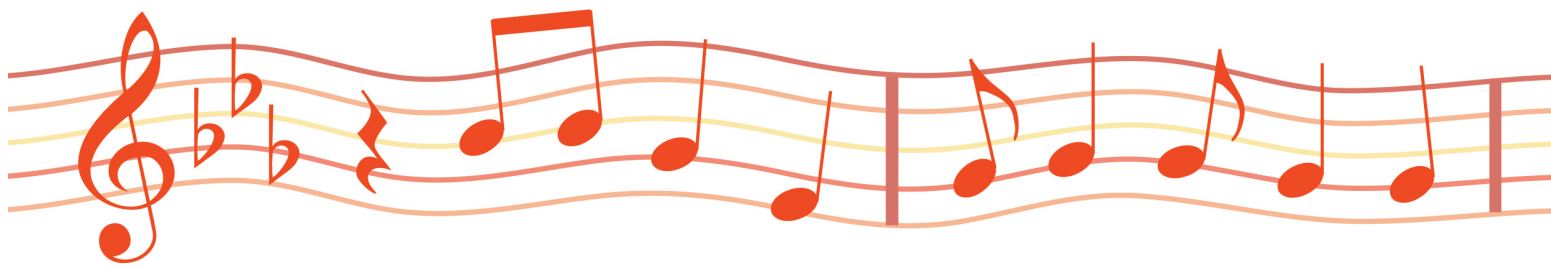
- Our Earth Echoes Learning Pack
- A short documentary film revealing the process in /behind Earth Echoes
- An Evaluation of Earth Echoes
- The Score of Earth Echoes
- The Script of Earth Echoes

[Here >](#)

Do let us know how you use the materials

The Rock Connects us.....

The GeoCollective



EARTH ECHOES: A SONG OF STONES

PRESET

(Orchestra, Brass Band, Rock seated SR. Human beings set beneath silk CS. Geologists & Earth Children off SL. Audience enter during preset. The space is full of smoke and light. It feels strange & ominous. Other-worldly sounds. Metal thunder sheets, wind machines, bass drum. Cellos occasionally play note 'G' - for geology. This is the beginning of the cosmos.)

VIDEO: A CRT monitor in 4:3 aspect ratio repeatedly boots some software on the central screen. Each boot-up attempt fails.

*LX : Mood stage. Slight light Rock turners. Pinspot shafts of light through Haze
F : Haze*

Show start

LX : HOUSE DOWN

VIDEO: The boot-up sequence runs in full and an operating system called Echo II (which looks like Apple II) loads. A command prompt (RUN A SONG OF STONES) is typed in. The system loads a text title: "EARTH ECHOES: A SONG OF STONES".

(Geologist #1 and Earth Children enter and sit USC.)

VIDEO: A second text title '1st MOVEMENT: THE HUMAN CONDITION' remains for the following scene, framed by rock textures on the outer screens.



PROLOGUE

(It goes quiet for a moment. A chorus of children are brought in on the backs of Geologists. They are innocent and do not belong to the preset world. It doesn't affect them. They Sit.)

(Live Rock thunder sounds fade out. The children open a book about the world, extinct animals and plants.)

CHILD #4 : What book are you reading?

CHILD #1 : It's about animals and plants.

CHILD #2 : I've got a book about that at home.

CHILD #3 : Me too.

CHILD #1 : These are from along time ago.

CHILD #5 : What do you mean?

CHILD #6 : She means they are extinct.

CHILD #2 & #3 : What?

CHILD #6 : Animals and plants from long ago that don't exist any more.

CHILD #4 : I don't understand.

CHILD #5 : Me neither.

CHILD #1 : Listen, *(reading from the book)* ... these are the vanished ones, the extinct ones. Creatures from a world humans never knew, long before our time. When these ancient beasts lived, the human race was still unborn. Fifty million years or more have passed since dinosaurs stalked the earth ...



- CHILD #4 & #5 : Fifty million?
- CHILD #2 & #3 : We still don't understand what extinct means.
- CHILD #1 : (*reading*) Extinction is the end of a species or a group of animals or plants.
- CHILD #4 : that was just dinosaurs.
- CHILD #6 : not just the dinosaurs
- CHILD #5 : I like dinosaurs. (*The children finish reading.*)



1ST MOVEMENT: THE HUMAN CONDITION

VIDEO: Letters, digits, half-formed words and questions drift upwards. After a beat, they fall together into a green heap like the parachute. The words EAT, SURVIVE and REPRODUCE translated into various languages begin scrolling downwards at speed.

(Muttering under the silk. As the silk is drawn off by Geologist #1, muttering becomes words and volume/movements grow.)

HUMANS : Eat, survive, reproduce ... *(repeated, getting louder & more urgent.)*

(A Gong sounds. The Humans freeze)

HUMANS : *(One by one, 6 individual humans rise to their feet. Each proclaims one of the following sentences.)*
I am so significant!
I am so insignificant.

VIDEO: Five lines of code made from letters and numbers appear. A cursor hops across the five lines at various heights, repeating the paths faster and faster until a pattern is recognisable. The 'stave' breaks in two - one half is forced under the other, like geological subduction. As the humans drop to their knees, the **LIVECAM** shows humans reaching up to the sky.

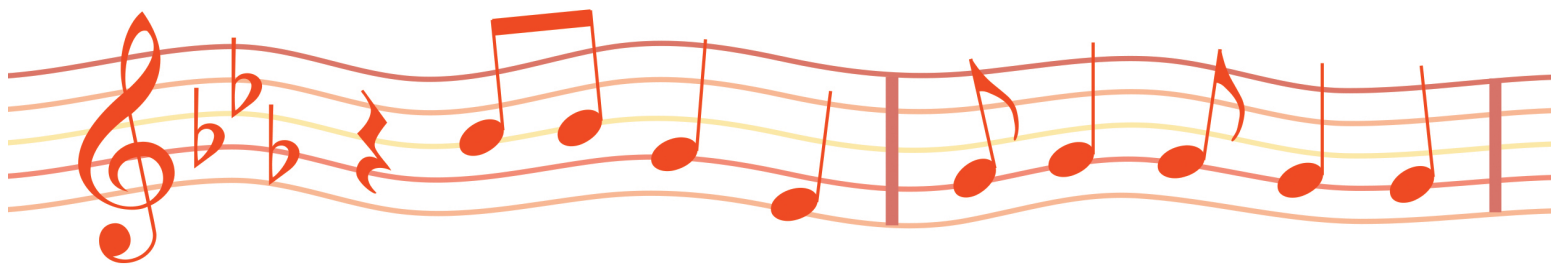
(A Gong sounds. The Humans drop to their knees and reach their hands in the air, looking upwards into the live camera.)

HUMANS: *(Calling out in exhausted tones) Will someone please help us?*

(Silence.)

VIDEO: Rock and fabric texture stills.

(We hear grunting, effort and possibly a little arguing. A small group of Geologist characters enter, pushing their structure SL.)



- GEOLOGISTS (ALL): It's a Silurian System. No it's a Cambrian System. It's neither. The fossils are clear. I propose the Devonian ... *(Each of the Geologists repeats their line on a loop as they enter)*
- (The Geologists seem preoccupied. All look similar, but there are differences about them and the equipment they have, eg chemistry, eyeglasses, microscopes, telescopes, rock hammers etc. These differences are linked to different sorts of Geology and geologists.)*
- HUMANS : *(The humans look at them - are they are in awe or frightened of them?)*
Are you God?
- GEOLOGISTS (ALL): No...(single voice) God No...(another) We're just.... (another) Like.... explorers, (another) like terranauts... (another) earthy astronauts...
- GEOLOGIST #4 : I'm a conductor ...
- GEOLOGISTS (ALL) : Yes ... we're all ... like ... Just ... conductors.
- HUMANS : What's a conductor?
- GEOLOGISTS : err – something that ... er ... (another voice) ... transmits stuff ... er... (another voice) helps things... er move along and what have you... (another voice) a kind of guide.
- GEOLOGISTS (ALL) : Yes ... a kind of guide. *(pleased with themselves.)*
- HUMANS : Well you have to guide us then. *(Humans gabble in response.)*
Yes! Guide us, yes, yes.
- GEOLOGISTS (ALL) : Guide you with what?
- HUMANS : Who we are, where we come from, where we are going? ... *(they start talking to each other manically)* Yes, yes - who we are, where...
- GEOLOGISTS (ALL) : Stop - you can't go on like this.
You have to get some perspective.



- GEOLOGIST #3 : You have to get some perspective on yourselves.
- HUMANS : Yes, yes we have to get some perspective - how how?
Tell us please please tell us - How how?
- GEOLOGISTS : *(Slightly alarmed) ... Erm*
- HUMANS : You have to tell us how.
- GEOLOGISTS : *(Look at their baton/book/microscope/telescope/magnifying glass... for an idea...one of them pulls out a clock/watch.)*
- GEOLOGIST #4 : Time.
- HUMANS : Time?
- GEOLOGISTS (ALL) : Yes time - you have to understand time.
- HUMANS : *(Getting very excited)* Time time, yes yes ... What's the time? ... We have to pick our kids up... I've got to finish this report... 9.35am ... Is it tea time yet? ... have you got the time? ... Am I late? ... Will we miss the train ... *(spoken fast. Additional text spoken by Human chorus relates to 'Human type' time.)*
- GEOLOGISTS (ALL) : *(Very alarmed as the mayhem starts again.)* Stop. STOP - no - not that time, not human time. A different sort of time. Unimaginable time.
- HUMANS : *(Alarmed.)* Unimaginable time ?!!!!
- GEOLOGISTS (ALL): *(Equally alarmed in their own way.)* Proper time, old time, stretched time, real time, spiral time, longtime time,

Time before you were born. Deep time, deep below you, longtime time, long after you, slowly speeding away from you... The Arrow of Time ...
- GEOLOGISTS (ALL): You don't understand do you?



HUMANS : *(Nodding their heads in awe.)* We don't understand.

(A geologist goes to a trap door. He puts his hand on it. The geologist opens the trap door. Light and smoke comes out of the structure. Slowly it opens. Music comes from below and swells upwards. There is a full 90 seconds - 2 minutes of the most profound music.)

VIDEO: Particles, in green like the Echo II text and coding, emerge from the bottom-right hand corner of the screen and float past, rising. Some are bright pinpoints of light and some are out-of-focus, like dust motes floating close to the lens.

(Aerial I : Aerialist enters and ascends gently)

GEOLOGISTS (ALL) : What happens to you when you listen to music? What happens?

HUMANS : *(Listening to the music as they speak. Glorifying in it.)*
I get lost - I drift,
I find myself
floating,
everything opens up
inside me and outside me.
I feel like I am connected to the whole world,
Connected to the universe,
I am transported
It makes me feel significant
And insignificant
All in the same moment.....in the same moment!

GEOLOGIST #4 : Understanding time is like listening to music.

(The music changes.)

GEOLOGIST #4 : Follow us.

HUMANS : Where ?

GEOLOGISTS (ALL) : Down.



HUMANS : Down?

GEOLOGISTS (ALL) : It's a gateway.

HUMANS : A Gateway?

GEOLOGISTS (ALL) : A way in to understanding. Understanding something we have lost.

GEOLOGISTS #3 : Follow us down.

SONG: Going Down

DOWN IN THE SOIL – WHERE THE WORMS ALL PLAY
DOWN IN THE DARK – WHERE IT'S DARK ALL DAY
DOWN IN THE BLACK – WHERE THE BUGS CAN'T SEE
DOWN IN THE PITCH – UNDER THE ROOTS OF TREES

I'M GOING DOWN,
I'M GOING DOWN

DOWN IN THE NIGHT – WHERE THE DAY CAN'T HIDE
DOWN IN THE CELLAR – LOCKED DEEP INSIDE

I'M GOING DOWN,
I'M GOING DOWN

DOWN IN THE DIRT – IN A BLIND BLIND HOLE
DOWN IN THE CRUST – WITH THE DIGGERS AND MOLES

I'M GOING DOWN,
I'M GOING DOWN
I'M GOING DOWN,
I'M GOING DOWN

DOWN IN THE SOIL – WHERE THE WORMS ALL PLAY

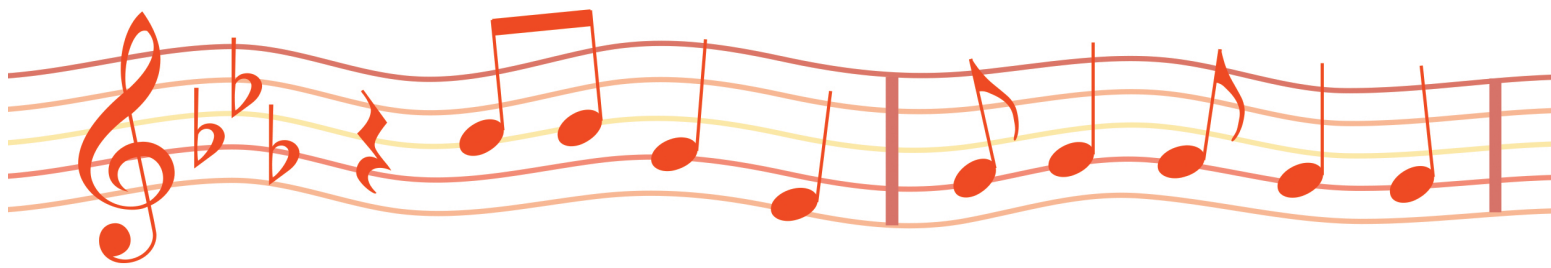


VIDEO: For the song's duration, five equidistant vertical lines travel down the central screen at different speeds. In the background, there is local sedimentary rock scrolling upwards in continuous motion, viewed through the scan lines and over-saturated colours of the Echo II monitor. On the outer screens, green particles drift upwards.

(The light changes and we all look up. A descending aerialist appears on silks. As the descender goes down and begins to reach the floor the thundersheets and sounds from the pre-show come back into the space taking over from the going down music.)

VIDEO: The vertical stave reaches the floor of the screen. The footage becomes unstable and glitchy – a fast montage of sand and rock scrolling upwards and then darkness.

(The 'Going Down' music fades away as the descender hits the ground and we are left with some of the sound of the preshow thundersheets and drums etc which take us into the second movement. The Humans are all on their knees and low on the stage.)



2ND MOVEMENT: AN EDUCATION IN TIME (TIME & THE ROCK)

VIDEO: Text slide: '2nd Movement: An Education in Time' / outer screens: costume textures.

(The music subsides. The focus moves back to the Children. They read aloud more material from the book of life and extinctions.)

CHILD #1 : Look at all these pictures of other animals that have died out. Sabre-toothed cat is one ...

CHILD #5 : And a thy-la-cine ...

CHILDREN (ALL) : A what ...?

CHILD #5 : Wait. That's not from millions of years ago. It's a photo. *(He reads)*
The last known wild thylacine was shot by a farmer in 1930.

CHILD #4 : I thought extinction was caused by big meteors from space.

CHILD #5 : Or a huge volcanic eruption.

CHILD #6 : Not always. Animals are dying out even now.

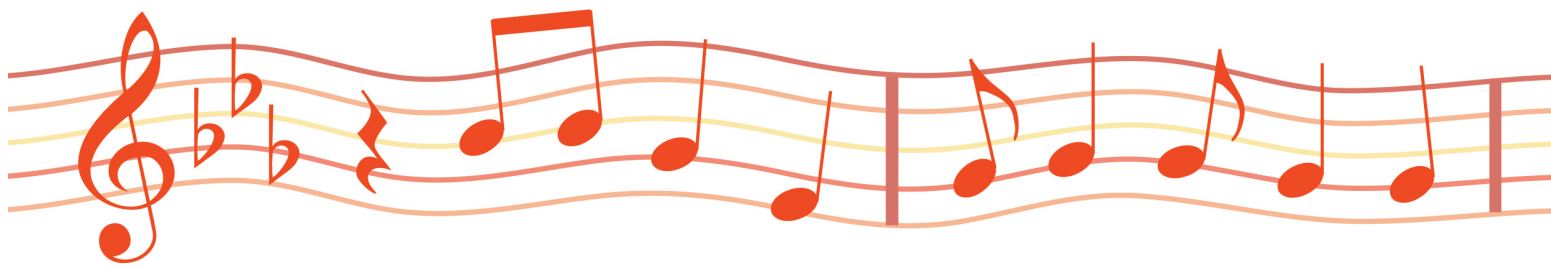
CHILD #2 : I know. Animals like Rhinos...they are endangered.

CHILD #6 : They're not all extinct though. Endangered means that if we are not careful they will be soon.

CHILD #4 : *(Pointing at the book.)* Don't forget the woolly mammoth...

CHILD #3 : Look at that moose.

CHILD #6 : That's not a moose. It's an Irish Elk. One of the largest deer ever.



CHILD #2 : Is it extinct?

CHILD #1 : Yes.

CHILD #3 : That's really sad.

CHILD #5 : Can we look at the dinosaurs again? I like dinosaurs.

CHILD #1 : Ok. They are at the beginning of the book.

VIDEO: A video title emerges from the layers of letters and words on the screen :
'2ND MOVEMENT: AN EDUCATION IN TIME'.

GEOLOGISTS (ALL): *(They ask)* How do we find that which we've lost. How to unearth the beginning of time, how do you track the twist of her tail ... the circuit of her spiral.....how do you follow the flight of the arrow?

(Each geologist answers relative to their specialism.) Theory... Physics ... Mathematics ... Chemistry ... Radiation ... Carbon dating ... Stratigraphy...

GEOLOGISTS (ALL) : Watch carefully, 4.6 million years in 10 minutes

VIDEO: An international clock face with hands moving forward rapidly. It disappears in the distance and five white vertical lines extend upwards, remaining as a stave through the sequence. To denote the passing of each time period (and mirror the layer-building), a bar line intermittently appears from the left of the video and slots into the stave before falling slowly downwards. The outer screens show a rock formation with sea/sky in the background.

(A pallet or similar stacking layer is brought in and laid down. This pattern continues throughout the sequence ... a geologist climbs up upon it each time ... layers are laid down as time passes.)

GEOLOGISTS (ALL) : Here begins Earliest Earth.



(The first few pallets/layers are now in. The music develops as layers are brought in and added to the stack(s). A geologist periodically stops the music to mark the following moments as the stack is built.)

VIDEO: Red, orange and yellow blobs, stains on old projected film, appear in the black space around the stave like flecks of molten rock and ejecta.

GEOLOGIST #1 : Here begins the Magnetosphere - Earth's magnetic field born stuttering.

GEOLOGIST #3 : The gongs.

(In-tempo music sequence begins with gongs. The human beings deliver their gesture work. The stack grows.)

VIDEO: A cartridge glitch appears in the stave, rectangles of solid colour and static overlap and jostle for space.

GEOLOGIST #1 : Here begins water....H₂O....the planet's tonic and the planet's tears.

GEOLOGIST #3 : The harp and other plucked strings.

(Music sequence develops with harp and plucked string instruments added. The human beings deliver their gesture work. The stack grows.)

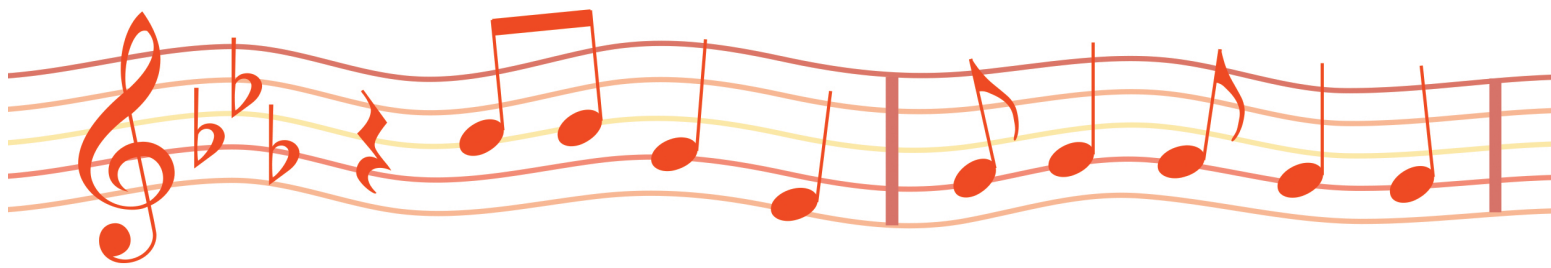
VIDEO: White film scratches are overlaid on the stave at slight diagonal, like heavy rainfall.

GEOLOGIST #2 : And here begins life, of sorts.. Stromatolites : layers of lime-secreting cyanobacteria and trapped sediment ... Mineral to organic... neither one thing nor the other.

GEOLOGIST #3 : The tuned percussion.

(Music sequence develops with tuned percussion instruments added. The human beings deliver their gesture work. The stack grows.)

VIDEO: The stave turns green and faint blobs (cyanobacteria) are secreted from its lines.



GEOLOGIST #5 : And here Oxygenbubble by highly reactive bubble... ...O₂...the breath of life to come...

GEOLOGIST #3 : The woodwind.

(Music sequence develops with woodwind instruments added. The human beings deliver their gesture work. The stack grows.)

VIDEO: Down each stave line comes the symbol for Oxygen, O₂. Each falls at a different speed.

GEOLOGIST #6 : And here, photosynthesis. Light energy converted to chemical energy.

GEOLOGIST #3 : A change of key and a change in tempo.

(Music sequence develops with instruments added. The human beings deliver their gesture work. The stack grows.)

VIDEO: From the top of the frame, on the note D (for vitamin D), a huge white light descends, triggering lens flare as it passes the field of view.

GEOLOGIST #6 : Here, an atmospheric envelope begins to stabilize... a moderating balancing act.

GEOLOGIST #3 : Played by the bowed strings.

(Music sequence develops with bowed string instruments added. The human beings deliver their gesture work. The stack grows.)

VIDEO: From right to left and one by one, each line blurs and rotates clockwise. They form one horizontal layer of diffuse cloud, before heading down like the other bar lines.

GEOLOGIST #5 : And here, multi-celled life appears... each cell with a different job... complication with aerobic respiration.

GEOLOGIST #3 : – ah yes – the brass section!



(Music sequence develops with brass instruments added. The human beings deliver their gesture work. The stack grows.)

VIDEO: The vertical stave reappears but the lines are wriggling and vibrating like vertical soundwaves.

GEOLOGIST #2 : And here, sexual reproduction...(electric guitar) *(the chorus react)*

GEOLOGIST #3 : ... the electric guitar.

GEOLOGIST #1 : the explosion.... in evolution... a greater rate of mutation... we are all the results of little mistakes... repeat after me...

ALL : We are all the results of little mistakes. *(Everyone repeats it)*

VIDEO: On the first horn notes, the outer screens flash Echo II boot-up glitches then a twitch of green lightening, timed to a drum-roll. On the centre screen, green particles drift and a cursor moves as text is typed into Echo II: WE ARE ALL THE RESULTS OF LITTLE MISTAKEZ. A pulsing human egg cell pursued by a single sperm cell emerges from the bottom-right corner of the screen and begins to travel up towards top-left. The cursor skips back and corrects the last letter of the text to read MISTAKES. An organism like a semi quaver with two sperm tails joins the chase and is pursued by hundreds of identical organisms.

(by now all instruments are in and we are musically playing with voices over the top...there is a rhythmic element going on throughout. Orchestra and brass band are playing and everyone sings)

Singing:

We are all the results of little mistakes
We are all the results of little mistakes
We are all the results of little mistakes
We are all the results of sexual
Re-pro-duc-tion sexual
Re-pro-duc-tion sexual



SONG : Here Are Fish (Sung by all, in 2 parts)

HERE ARE FISH (Group 1)

HERE ARE FISH (Group 2)

HERE ARE PLANTS (Groups 1 & 2)

HERE ARE AMPHIBIANS (Group 1)

HERE ARE AMPHIBIANS (Group 2)

HERE ARE CRABS (Groups 1 & 2)

VIDEO: The vertical stave again and the bar lines slot in at faster intervals, speeding up all the time as evolution takes hold and accelerates.

SONG: Here Are Fish (in 2 parts – sung by all)

INSECTS, SHARKS, PLANTS, REPTILES
BEETLES, DINOSAURS, FORESTS, MAMMALS
BIRDS, CROCODILES, BEES, SNAKES,
ANTS, WHALES, BATS, CATS
DEER, GIRAFFES, HYENAS, BEARS,
HERE THE FIRST GREAT APE APPEARS
KANGAROOS AND SLOTHS AND DOGS
ELEPHANT, RHINOCEROS

HOMINIDS, SPEECH, TOOLS, FIRE
HERE FIRST HUMANS APPEAR
HERE WE ARE THE HOLOCENE
HERE WE ARE

VIDEO: “Here we are the Holocene”. A Coda symbol scrolls into view next to the vertical stave. The stave fades leaving the symbol suspended. It looks like target sighting of a gun.

GEOLOGIST #2 : *(the geologist peels off a tiny thin layer of film from the top layer....)*

Here we are in this tiny, tiny bit of time... this, not even thick enough to be a crotchet of time time... sellotape thin... infinitesimally here... and that, relative to relative, is perspective.



SONG: from Eternity by William Blake

(SUNG BY CHILDREN AND ECHOED BY ADULTS)

TO SEE A WORLD IN A GRAIN OF SAND
AND HEAVEN IN A WILD FLOWER
HOLD INFINITY IN THE PALM OF YOUR HAND
AND ETERNITY IN AN HOUR.

VIDEO: Water pouring over rock. The splash of a wave leaves flecks of saltwater on the camera lens.

(With this music and verse all Children pick up sand or dust or equivalent and let it flow slowly out of their hands to the ground).

(End of song. The children start to sit. The children open the book again).

VIDEO: Text title “3rd MOVEMENT: THE ROCK CONNECTS US” remains for the following scene, framed by rock textures on the outer screens.

CHILD #1 : ... Some of these dinosaurs must have been huge.

CHILD #2 : *(pointing to the book)* what's that lumpy stone?

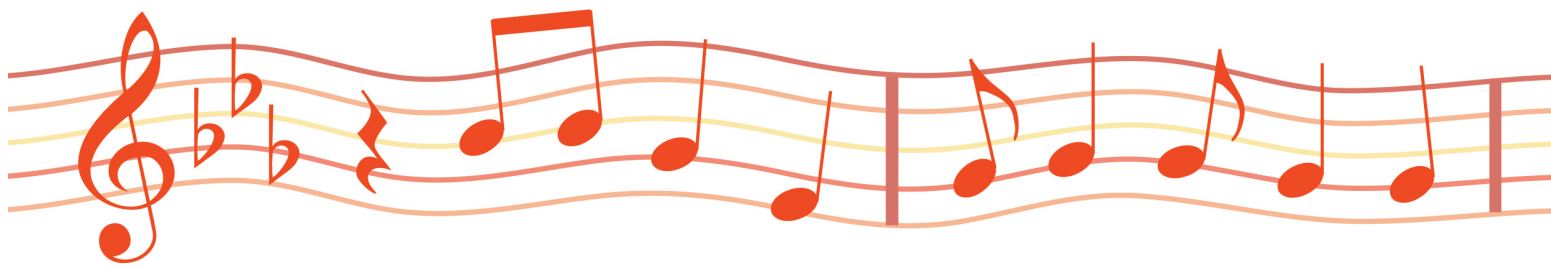
CHILD #6 : a fossil.

CHILD #3 : What's a fossil?

CHILD #1 : It says.... “the word fossil comes from the Latin word fossilis, which means to dig up.”

CHILD #4 : I like digging.

CHILD #5 : I like dinosaurs.



- CHILD #6 : Well it's both of those. Scientists dig up fossils to find out more about dinosaurs.
- CHILD #4 : Imagine digging deep into the earth like a giant worm.
- CHILD #5 : Yeah...looking for secrets....
- CHILD #1 : ...Layers and layers of muddy stories.
- CHILD #6 : (*Referring to book.*) Scientists who know a lot about digging through layers in the earth are called Geologists.
- CHILD #4 : I want to be a Geologist.
- CHILD #2 : What's in the last part of the book? Is it *all* about dinosaurs and digging?
- CHILD #3 : We want to find out about other animals and living things.
- CHILD #1 : (*serious*) Maybe we should wait for another time.
- CHILD #6 : Yes perhaps it would be best.
- CHILD #4 & #5 : We don't want to wait. Turn to the end... Tell us more now.
- CHILD #1 : No, not yet (*slams book shut*).



3RD MOVEMENT: THE ROCK CONNECTS US

(A Geologist is on top of a pallet.)

GEOLOGISTS (ALL) : *(Speaking)*. This is us.

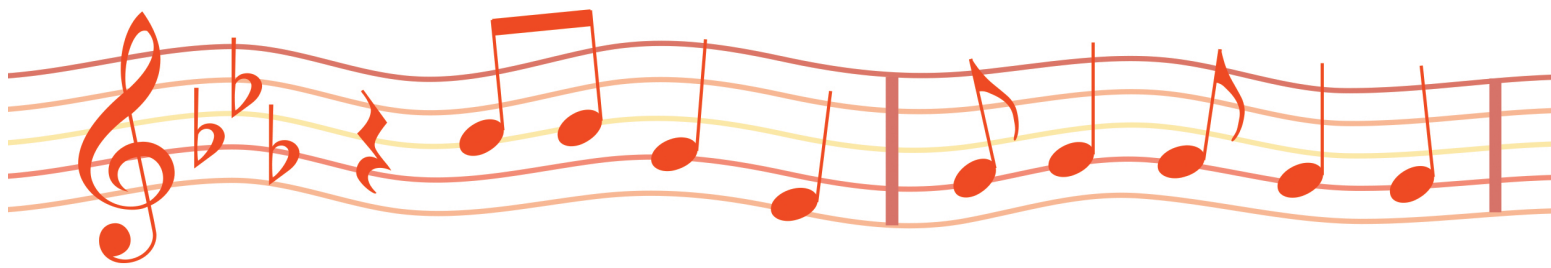
(There is an argument amongst the humans.)

VIDEO: Accompanied by loud mechanical clock sounds, a game of Pong. Each time the 'ball' impacts with a bat, we cut to flashes of archive footage: a burnt out car, soldiers in gas masks running through smoke, explosions, a human eye blinking, the distracted face of a girl in a classroom, a torture device, a roll of barbed wire, a game of space invaders, blood being drawn into a syringe. The game freezes. We push in on the Pong 'ball' and see it in close-up as a square. It begins to revolve and we see it is a 3D cuboid. On its surface, blue ocean and atmospheric clouds begin to appear. As the cube makes its final turn, the super-continent of Pangaea is revealed. For the duration of this sequence, on the outer screens, a gradual zoom out from what appear to be geological lines in rock. Slowly, this strata is revealed as the image of a single human fingerprint. In time with the clunking of the clock mechanisms, bright lines pass over image and suggest the fingerprint is being scanned by a machine, as if after a crime.

(Humans separate into two groups.)

HUMANS :
No we are us. They are them. *(repeat)*
We are not them. We are us. They are them.
We are us they are them ...
We are us they are them ...

GEOLOGIST #3 : *(Speaking)* STOP!
We are so tiny. Look how tiny we are.... compared to all this....
(points to the pallets below) the thinnest layer of time.
This is US -
the present tense –
spread out on the surface
of the planet.



GEOLOGIST #3 : Us and them - Them and us
We think we are so so different from each other.

GEOLOGIST #2 : *(Speaking.) So so different, but all with the same history.
The same global history. The rock connects us. (Each time 'the rock connects us' is spoken by the geologists all echo 'the rock connects us')*

GEOLOGISTS (ALL) : *(Spoken in different voices. Geologists commenting on each other, interacting. During this, Humans mix, split into continents and then come back together again.)*

We were all the supercontinent UR, meaning 'original', 3 billion years ago,
and then RODINIA, meaning 'the motherland', 1.3 billion years ago,
and then PANGAEA, meaning 'all earth', 300 million years ago.

We will be one land again many times in the future.
Our continents drift into and away from each other.
The borders between us dissolve and reform endlessly.

Sometimes we are separate,
sometimes we are together.

GEOLOGIST #3 : Let us all sing/hum the note 'G' for Geo, for the Earth
and hear how the rock connects us?

VIDEO: A slide show of imagery from Geoparks around the world. Audio/music segues with the changing visual, always harmonising with the note of G. At the end of these slides, text denotes we are now in 'The English Riviera'. Humans on the screen begin to play stones and this becomes a rhythm track for the live musicians to play over for the following song: Tango Miner. The humans onscreen enact each of the song's examples of geological connectivity. For the clapping dance, we see a bare human foot stomping repeatedly, connecting with the ground beneath. For the English line dance, we see horizontal lines creep in from the edge of the screen, matching the movement of the live choreography. A five-line stave is rendered over faint stratigraphy. Lyrics, in 'Echo II font', appear on the stave in time with the live singing and their positioning corresponds to the melody. On the outer screens, as the stones are handed out and accumulate onstage, we slowly push out from a huge pile of pebbles.



GEOLOGIST #2 : *(Speaking.)* Come here - hold/take this.

(Two humans come forward and are given a pebble each.)

GEOLOGIST #2 : *(Speaking.)* Wales, Geo Mon, and Canada, Stonehammer - originally together until the break up of Rodinia, now separated by the Atlantic ocean.

The rock connects us.

(The 'Tango Miner' music begins. The two humans begin dancing and then the first verse is sung, G drone still sung by some. Stones are also played as part of the music.)

SONG: The Tango Miner

HUMANS

LINES OF DIVISION, THIS ROCK WE LIVE ON
TOO MANY MINDS IN SEPARATION,
THIS IS A GLOBAL TANGO - LET'S GO!
TIME, TIME FOR RECONNECTION

GEOLOGIST #5 : *(Speaking.)* Come here - hold/take this.

(Six humans come forward, in three pairs, and are given a pebble each.)

GEOLOGIST #5 : *(Speaking.)* M'Goun, Morocco and Maestrazgo, Spain, formed next to each other during the Jurassic, then drifted apart with the formation of the Mediterranean sea. The rock connects us.

(These three pairs join the first pair and begin dancing while the second verse is sung.)



SONG: The Tango Miner ... continued

HUMANS

CONTINENTS AND LANGUAGES, THIS ROCK WE LIVE ON
TOO MANY MINDS IN SEPARATION
THIS IS A GLOBAL TANGO - LET'S GO!
TIME, TIME FOR RECONNECTION

GEOLOGIST #6 : *(Speaking.)* Come here - take this.

(Eight humans come forward, in four pairs, and are given a pebble each.)

GEOLOGIST #6 : *(Speaking.)* Odsherred, Denmark and Tumbler Ridge, Canada both shaped by the same sculpting forces of glaciation. The rock connects us.

(The four pairs join the other four pairs and begin dancing whilst the chorus is sung.)

SONG: The Tango Miner ... continued

HUMANS

THE ROCK CONNECTS US
THE ROCK CONNECTS US
AND WE MOVE THE WORLD TOGETHER

GEOLOGIST #1 : *(Speaking.)* Lanzarote, Spain, Vulkaneifel, Germany and Unzen, Japan all related through recent volcanic activity. The rock connects us.
(All sixteen dancers connect into four quartets and move on to dancing the Louisiana Clapping Dance while verse 3 is sung.)

SONG: The Tango Miner ... continued

HUMANS

WHERE WE LIVE AND WHERE WE DIE, THIS ROCK WE LIVE ON
TOO MANY MINDS IN SEPARATION
THIS IS A GLOBAL TANGO - LET'S GO!
TIME, TIME FOR RECONNECTION



GEOLOGIST #2 :

(Speaking.) Naturejo, Portugal and Yuntaishan, China connected through their fossils and tracks and evidence of trilobites. The rock connects us.

(All sixteen dancers connect into two lines of 8 facing each other and do a variant of a line dance while the final chorus is sung.)

SONG: The Tango Miner ... continued

HUMANS

THE ROCK CONNECTS US
THE ROCK CONNECTS US
AND WE MOVE THE WORLD
THE ROCK CONNECTS US
THE ROCK CONNECTS US
WE MOVE THE WORLD TOGETHER

GEOLOGIST #5 : *(Speaking.)* Psiloritis, Greece and Harz, Germany - both with evidence of two of the major extinctions so far seen on this earth. The end Devonian and the end Permian extinction. The rock connects us.

LIVECAM : Overhead of circle dance is shown on centre screen.

(All sixteen dancers connect into one line, dancing. The music continues and a new melody emerges. Others join as the song turns into the spiral dance, snaked around by all. Music and dance ends.)

(One Geologist has sat out throughout the 3rd movement next to the children - looking at the Sellotape layer in one hand and a lump of limestone in the other. S/he feels some kind of guilt. At the end of 3rd movement s/he starts laughing. Laughs and laughs and then speaks.)

GEOLOGIST #1 :

(interrupting with laughter) Isn't that wonderful. Geo wonderful. Gateways to understanding... Cute - lovely, holding hands. Get some perspective... Our billions of people connectedness, our tiny sliver of time makes us more significant than we think. I should know, we should know - our geological knowledge has helped to tear the heart from the world.



4TH MOVEMENT: WHAT DO WE WANT TO LEAVE BEHIND?

VIDEO: Text Title: “4th MOVEMENT: WHAT DO WE WANT TO LEAVE BEHIND?”
remains for the following scene, framed by fabric textures on the outer screens.

(The children start to read from the book, forward in time about the extinction of the our equivalents, bees, horses, plankton, fish. Children 4&5 are now holding the book and reading with 2&3 looking over their shoulders. They are quiet and serious.)

CHILD #6 : You were supposed to wait for a better time.

CHILD #2 & #3 : We did. We waited ages.

CHILD #1 : What are you reading about now?

CHILD #2 : Bees and butterflies.

CHILD #3 : They are all extinct. Flowers and plants too.

CHILD #4 : Crocodiles and beetles. All gone.

CHILD #5 : Monkeys, cats and sparrows.

CHILD #1 : Let me read. Wow, what a big list of names...

CHILDREN (ALL) : The vanished ones.... There are so many of them. Foxes, Zebras,

CHILD #3 : Homo sapi.. What does that say?

CHILD #6 : Homo sapiens. Homo sapiens have vanished too.

CHILDREN (ALL) : *(in unison)* Homo Sapiens have vanished too.

(Stillness and silence)



GEOLOGIST #1 : We tiny creatures will be part of the geological story.
 What do we want our impact to be? Us billions?
 Soot?
 Rust?
 Methane?
 Uranium?
 Plutonium?
 Plastic?
 (above is repeat echoed by geologists with Not Soot, Not Rust, etc.)

GEOLOGIST #1 : We are part of the geological story, we are writing a new chapter....
 a new epoch: The 'ANTHROPOCENE'.

ALL ECHO : Anthropocene.

VIDEO: The word Anthropocene appears on the screen in grey. As each letter lights up, white dots on a staff appear beneath it and we hear Echo II's oppressive electronic tones; the musical translation blaring out from the dark screen.

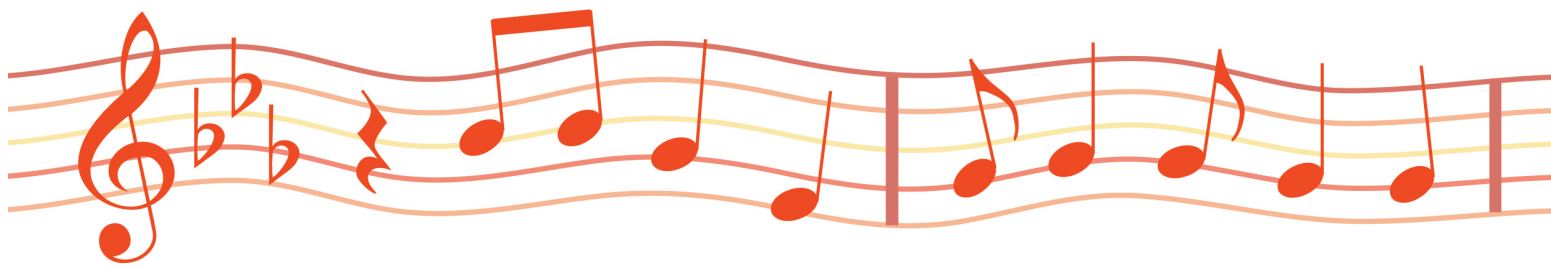
(The electronic ANTHROPOCENE melody from the video leads into brass band playing 'Abide with Me'. Then all sing: What De We Want To Leave Behind (Part I: Abide With Me) – below.)

VIDEO: Long and slowly panned shots filmed on an overcast day at Berry Head, Brixham. Long dead creatures and shapes preserved in rock. A dewy cobweb smothering a gorse bush. Ripples that move down the outer screens. A fisherman pulls a dozen mackerel out of the sea.

SONG: What Do We Want To Leave Behind (Part I)

SWIFT TO ITS CLOSE EBBS OUT LIFE'S LITTLE DAY
EARTH'S JOYS GROW DIM, ITS GLORIES PASS AWAY
CHANGE AND DECAY IN ALL AROUND I SEE
ALL THOSE OLD LIMESTONE BONES ABIDE WITH ME.

(The other geologists speak over the continuing music):



GEOLOGIST #1: We are getting to understand ourselves now

GEOLOGISTS (ALL) : *(echoing)* We are getting to understand ourselves now

GEOLOGIST #3: We are getting some perspective

GEOLOGISTS (ALL) : *(echoing)* We are getting some perspective

GEOLOGIST #1: Individually significant and insignificant in the same moment

GEOLOGISTS (ALL) : *(echoing)* Individually significant and insignificant in the same moment

GEOLOGIST #3: Empowered and disabled at the same time.

GEOLOGISTS (ALL) : *(echoing)* empowered and disabled at the same time.'

Singing: Simultaneous significant and insignificant (Humans)

significant

When I hear the rain up on my roof
When I see the sun rise
When I take a beachwalk with my mum
When I see the sun set
When I hear a message from my dad
When I see a friend smile
When someone shares something good with me
When I hear you laugh

insignificant

When I cannot trust you like I could
When I have no hope
When I get bumped into in the street
When I'm just a number
When I'm crying and no-one takes notice
When I am ignored
When I watch the news and it's all war
When I am betrayed

GEOLOGISTS (ALL): *(Speaking over the continuing music. They echo their own words in canon.)*
The question is, what do we want to leave behind, what do we want
our echo to be? We are changing geology, we are changing the world
significantly. What do we want our echo to be?

VIDEO: The camera is now mobile and hand-held. It hews close to the rock and looks with wonder and awe over its surfaces as if the voices onstage are emanating from within it.



SONG: What Do We Want To Leave Behind (Part 2)

HUMANS/ROCKS

WE WANT TO LEAVE BEHIND A WORLD WHERE
PEOPLE LOVE MORE THAN THEY HATE

GEOLOGISTS/CHILDREN

OUR VOICES IN THE HEART OF THE ROCK

HUMANS/ROCKS

AND A WORLD WHERE WE STILL EAT AND SLEEP

GEOLOGISTS/CHILDREN

OUR VOICES IN THE HEART OF THE ROCK

HUMANS/ROCKS

WE WANT TO LEAVE BEHIND A WORLD THAT'S NOT SO DIFFERENT AND STRANGE

GEOLOGISTS/CHILDREN

OUR VOICES IN THE HEART OF THE ROCK

HUMANS/ROCKS

AND A WORLD WHERE WE UNDERSTAND OUR MISTAKES

GEOLOGISTS/CHILDREN

OUR VOICES IN THE HEART OF THE ROCK

(Music and singing continues into next song – below)

VIDEO: The camera moves under an outcrop. We see a spider-web and within it, a dead spider suspended. Black screen. Seven soft-edged boxes of video appear and get subtly larger. In each box, we see repeating loops of various animal species that each run for different lengths of time and phase against each other. Over this final song and as orchestral and vocal sections cut out, one by one, the boxes distort and turn off like little CRT monitors.



(As gradually each species is removed from the video, a section of the orchestra stops playing. The orchestra is dying as the species are dying. We are left with the singing voices. The words they are singing are not hopeless. They have an optimism even in this moment of extinction.)

SONG: Earth's Echo: A Song of Stones

WE MAY BE TALLER AND OLDER AND WISER
A RISING, AN ELBOW, A KNEE, A FOOT
STORIES IN BODIES, A FOSSIL RECORDING
WE'RE JUST ASLEEP, WE'RE RESTING AND DREAMING

A REMEMBRANCE, EARTH'S ECHO, A SONG OF STONES
A REMEMBRANCE, EARTH'S ECHO, A SONG OF STONES
A REMEMBRANCE, EARTH'S ECHO, A SONG OF STONES

GEOLOGISTS/CHILDREN

RESPONSIBILITY FOR WHAT WE'VE DONE AND WHAT WILL COME

A REMEMBRANCE, EARTH'S ECHO, A SONG OF STONES

GEOLOGISTS/CHILDREN

RESPONSIBILITY FOR WHAT WE'VE DONE AND WHAT WILL COME

(The choir gradually reduces to the Geologists and Children singing 'responsibility for what we've done and what will come'. Then reduces down to one child's voice 'responsibility for what we've done'.)

VIDEO: The last image to turn off is an image of a human child riding a water slide into the ocean in slow motion. A human hand holds a handful of sand and a glass marble of the Earth. Slowly, the hand closes around it.

VIDEO: Echo II's home screen from the beginning of the piece. In close up, we see a new command line being typed. RUN: SYSTEM REBOOT. Cut to black.

Ends