

SCIENCE SPAZA

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ARCHAEOLOGY: LISTENING TO THE PAST



HI NOMONDE. ANY EXCITING DISCOVERIES TODAY?

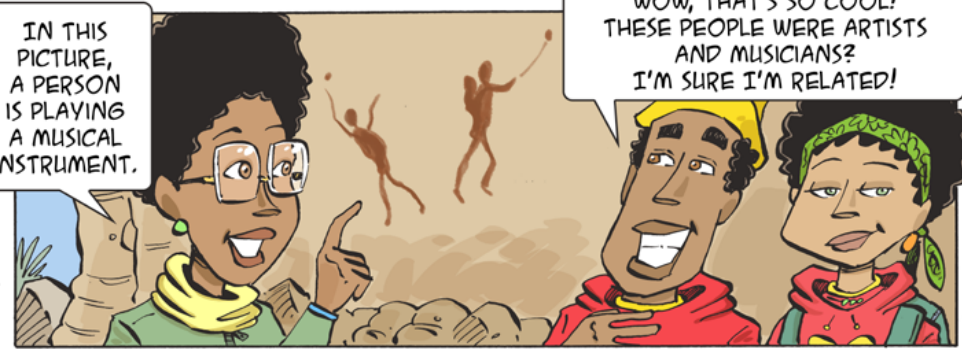
WELL, DID YOU KNOW NOT ALL OUR HERITAGE IS BURIED IN THE GROUND? COME HAVE A LOOK AT THIS.

WE CAN LEARN ABOUT THE CULTURES AND LANDSCAPES OF ANCIENT PEOPLE BY LOOKING AT ART, LIKE THESE ROCK PAINTINGS FROM THOUSANDS OF YEARS AGO.



IN THIS PICTURE, A PERSON IS PLAYING A MUSICAL INSTRUMENT.

WOW, THAT'S SO COOL! THESE PEOPLE WERE ARTISTS AND MUSICIANS? I'M SURE I'M RELATED!



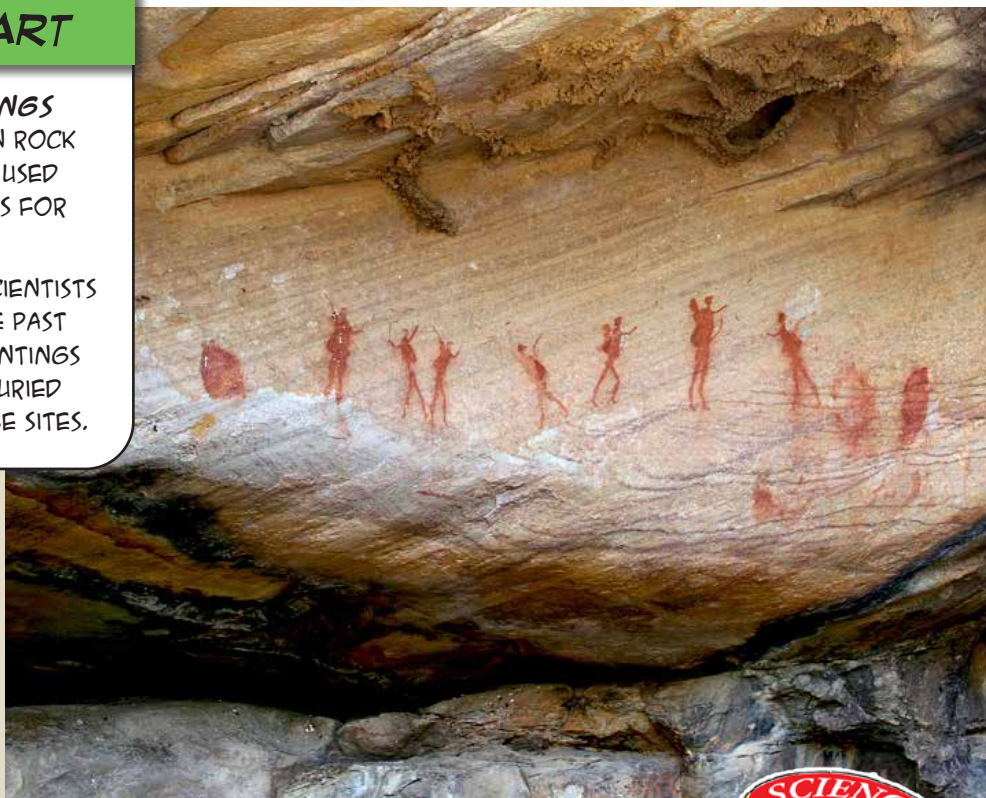
INTRO TO SA ROCK ART

SOUTH AFRICA HAS MANY **ROCK PAINTINGS** FROM ANCIENT TIMES FOUND IN CAVES, ON ROCK OVERHANGS AND ON BOULDERS. PEOPLE USED TO EXPRESS THEIR CREATIVITY AND BELIEFS FOR THOUSANDS OF YEARS IN THIS WAY.

ARCHAEOLOGISTS ARE SCIENTISTS WHO LEARN ABOUT THE PAST BY STUDYING SUCH PAINTINGS ALONG WITH ANY BURIED ITEMS FOUND AT THESE SITES.



Human figures painted on a cave wall in the Cederberg Mountains, Western Cape.
Photo: © Neil Rusch



Knowledge is Ncah!



MAKE A BULLROARER

A **BULLROARER** IS A SIMPLE INSTRUMENT THAT MAKES A SOUND WHEN SPUN THROUGH THE AIR. ARCHAEOLOGISTS BELIEVE THAT BULLROARERS AND OTHER SPINNING DISKS LIKE "**WOER-WOERS**" WERE USED BY ANCIENT PEOPLE TO COMMUNICATE OVER LONG DISTANCES, ANNOUNCE IMPORTANT RITUALS OR JUST TO MAKE SOME MUSIC!

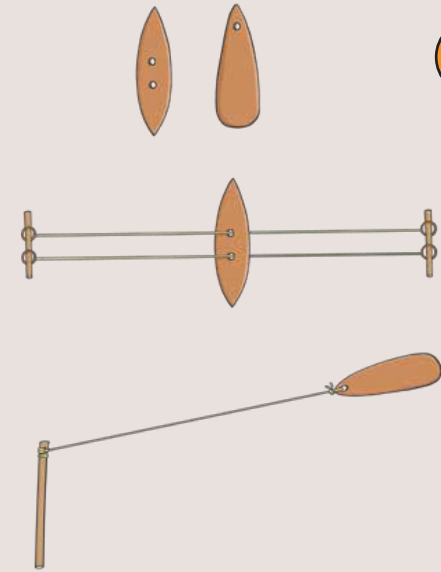


YOU WILL NEED:

- SCISSORS
- CARDBOARD OR ANY FIRM MATERIAL LIKE PLASTIC.
- PENCIL OR MARKER
- PAPER PUNCH OR SHARP PENCIL
- STRING, ABOUT 50CM
- A STICK TO TIE THE STRING TO (OPTIONAL)

1 DRAW AND CUT OUT AN OVAL SHAPE FROM YOUR CARDBOARD OR PLASTIC. IT COULD BE ABOUT 10CM-15CM LONG AND 5CM-8CM WIDE.

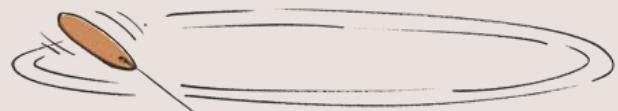
2 PUNCH OR POKE A HOLE TOWARDS THE ONE END OF THE OVAL.



3 THREAD THE STRING THROUGH THE HOLE AND TIE IT TO THE OVAL ON THE ONE END.

4 TIE THE STRING TO A STICK, IF YOU CHOOSE TO.

5 SWING THE BULLROARER ABOVE YOUR HEAD OR IN FRONT OF YOU. LISTEN TO THE MUSIC OF THE PAST.



WHAT'S HAPPENING HERE?

SPINNING THE BULLROARER PRODUCES A SOUND AS THE OBJECT **VIBRATES** THROUGH THE AIR.

THE SHAPE AND THE WEIGHT OF THE SPINNING DISK WILL INFLUENCE THE SOUND YOU HEAR. TRY TO MAKE YOUR BULLROARER HEAVIER BY CUTTING AND PASTING AN EXACT COPY OF THE SHAPE TO IT. LISTEN TO THE DIFFERENCE IN THE SOUND IT MAKES.



PIECES OF THE PUZZLE

Sometimes when archaeologists are really lucky, they find evidence in excavations that matches pictures painted on cave walls. Recently, a researcher at the University of the Witwatersrand, Joshua Kumbani, discovered "bullroarers" in excavated materials in the Cape. These musical instruments matched those painted on nearby cave walls by ancient artists.



Above: Joshua Kumbani (left) excavating at Klasies River Mouth



Matjes River artefacts. Photo: © Neil Rusch

Joshua and his fellow researchers at the University of the Witwatersrand study the sounds and music of ancient people of South Africa. He also takes the past into the future with the *OpenHeritage* project. This project uses software to digitise and publish archaeological sites and artefacts, making it available for generations to come.



Joshua Kumbani

CAREERS



ARCHAEOLOGY OFFERS EXCITING CAREER OPPORTUNITIES LIKE DOING RESEARCH OR WORKING AT A **CULTURAL HERITAGE SITE**. SOME ARCHAEOLOGICAL SITES ALLOW TOURISTS TO VISIT AND EXPLORE THE ENVIRONMENT AND HERITAGE OF THE AREA. CAREER OPPORTUNITIES AT SUCH HERITAGE SITES INCLUDE **GUIDES, MUSEUM CURATORS AND EDUCATIONAL OFFICERS**.

CURRICULUM LINKS

- *Gr 10 Physical Science:*
Waves, Sound and Light;
Sound waves
- *Grade 5 Social Sciences:*
Hunter-gatherers and herders of southern Africa;
Rock art

Knowledge is NCAW!



PUZZLE YOUR MIND

WHICH PIECE OF THE PUZZLE WILL COMPLETE THE PICTURE? MATCH THE CORRECT LETTER WITH EACH NUMBER CARD TO COMPLETE THE TERM.

1



VALUABLE THINGS PASSED ON TO FUTURE GENERATIONS. IT COULD BE TRADITIONS, LANGUAGES OR PLACES.

2



THE STUDY OF HUMAN HISTORY BY LOOKING AT REMAINS OF THE PAST.

3



TO CAREFULLY REMOVE EARTH FROM AN AREA TO FIND BURIED REMAINS.



A



B



C

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Name: _____

Telephone number: _____

Email address: _____

Physical address: _____

Visit www.sciencespaza.org, email info@sciencespaza.org, SMS or WhatsApp us on 076 173 7130 or write to us at PO Box 22106, Mayor's Walk, 3208.

WE WANT YOUR FEEDBACK!

I WOULD LOVE TO SEE PHOTOS OF YOUR BULLROARERS. PLEASE SHARE YOUR PICS! VISIT THE SCIENCE SPAZA PAGE ON FACEBOOK, OR WHATSAPP YOUR PICTURES TO 076 173 7130.



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OpenHeritage
THE FUTURE OF OUR PAST



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