



# AFRICAN COSMOS

Stellar Arts ✦ ✦ ✦

*Family Guide*

JOIN THE CONVERSATION!  
CONNECT TO THE AFRICAN  
COSMOS DIARY.



AFRICAN COSMOS: *Stellar Arts*  
June 20–December 9, 2012

*front cover*

Garth Erasmus

b. 1956, South Africa

*Untitled (detail)*

1996

Acrylic and crayon on paper

29.5 x 21.0 cm (11 5/8 x 8 1/4 in.)

National Museum of African Art,

Smithsonian Institution, gift of

Lee Lorenz in memory of

Philip L. Ravenhill, 97-23-2

Photograph by Franko Khoury

*back cover*

Willem Boshoff

b. 1951, South Africa

*Slices of Air*

2010

Belfast black granite

Collection of the artist

Photograph by the artist

Written by Deborah Stokes

Edited by Migs Grove

Designed by Lisa Buck Vann



## Welcome!

HAVE YOU THOUGHT ABOUT THE STARS AND PLANETS? Or constellations and galaxies? Or Africa? Both artists and scientists raise good questions about our world and use their curiosity and creative imagination to find answers. Whatever you have imagined, this guide will direct you to some key works of art in the exhibition to help you think about what you already know and what there is to discover. Let's keep exploring!

*Cosmic Wonders* help foster observation and spark conversations and exchange while exploring the exhibition with friends and family. Look for the  symbol throughout the family guide.

*Cosmic bytes* are fun facts sprinkled throughout the family guide.

A **GALAXY OF ACTIVITIES** at the National Museum of African Art and other Smithsonian Institution museums can be found at [africa.si.edu](http://africa.si.edu). The family guide and our collaborative programming are supported through Smithsonian Institution funds from the Consortium for Understanding the American Experience and the Consortium for Valuing World Cultures. A special thanks to the members of the African Cosmos Advisory Committee, which was funded by a Smithsonian Youth Access Grant.

The National Museum of African Art partnered with the educators and scientists at the Smithsonian Astrophysical Observatory, National Air and Space Museum, National Museum of Natural History, Anacostia Community Museum, National Postal Museum, National Museum of the American Indian, and the Hirshhorn Museum and Sculpture Garden ArtLab+.

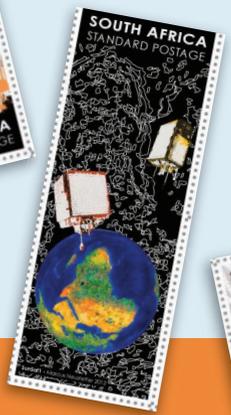
Only 12 human beings have ever visited another world—they walked on the moon.

*Cosmic Byte!*

The works of art in *African Cosmos: Stellar Arts* come from among the **55** countries that make up the African continent. Discover the many stories that **looking at art can reveal.**

## Cosmic Wonder!

Find the largest country in Africa. The smallest. Look for all the countries that are represented in *African Cosmos: Stellar Arts* and mark them with a star.



Indian Ocean

## The Art of Observation and Discovery

ART IS A UNIVERSAL LANGUAGE, and astronomy helps us think about our place in the universe.

Throughout history, people have observed the night sky with its countless constellations. In Africa, as elsewhere in the world, these observations have been central to

- \* the formation of creation stories and religions,
- \* the forecasting and marking of the seasons and agricultural cycles,
- \* the planning of city sites, and
- \* navigating travel on land and sea.



AS YOU VIEW *AFRICAN COSMOS: Stellar Arts*, LOOK FOR WORKS THAT RELATE TO THESE CELESTIAL BODIES AND EVENTS.



SUN



MOON



STAR



CONSTELLATION

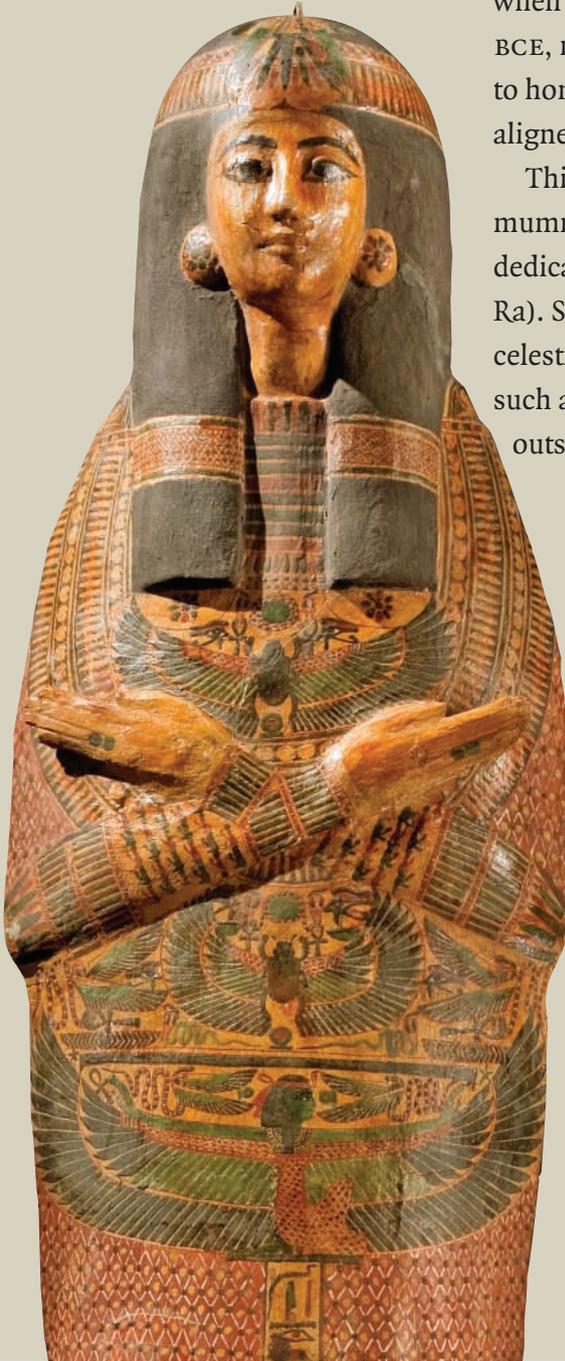


LIGHTNING



RAINBOW

Mummy board (detail)  
 Deir el-Bahari (Thebes), Egypt  
 Dynasty 21, c. 1075–945 BCE  
 Sycamore wood, clay, linen,  
 chalk, adhesive, paint  
 165.1 x 35.6 cm (65 x 14 in.)  
 National Museum of Natural  
 History, Smithsonian Institu-  
 tion, Department of Anthro-  
 pology, A364998



## Cosmic Connections

EGYPTIAN ART IS AMONG THE OLDEST in the world. Egyptian artists followed specific rules when depicting their deities. By the fifth century BCE, many pyramids, obelisks, and temples built to honor the sun deity Re were intentionally aligned with the stars.

This beautifully painted board covered the mummy of a woman who sang in a temple dedicated to the sun god Amun-Re (also spelled Ra). Scenes on this mummy board connect celestial ideas and cycles of life and departure, such as the sky goddess Nut with her wings outstretched to carry the deceased to the stars.

### Cosmic Wonder!

What shape is an obelisk? The Washington Monument, a famous monument in Washington, D.C., is based on this Egyptian structure!



LOOK CLOSELY AND FIND TWO WINGED SCARAB BEETLES.

LOOK FOR THESE MOTIFS ON THE ARTWORKS IN THE EGYPTIAN SECTION OF THE EXHIBITION.



## NUT

goddess of the sky and all celestial bodies shown with the earth god Geb



## HORUS

deity of the sky and creation in the form of a falcon



## AMUN-RE

the sun god, portrayed with the head of a falcon and a sun disk resting on his head



## SCARAB

associated with Khepri, the god of the rising sun



## EYE OF HORUS

symbol of protection, royal power, and good health



## AKHET

the horizon embracing both the sunrise and sunset



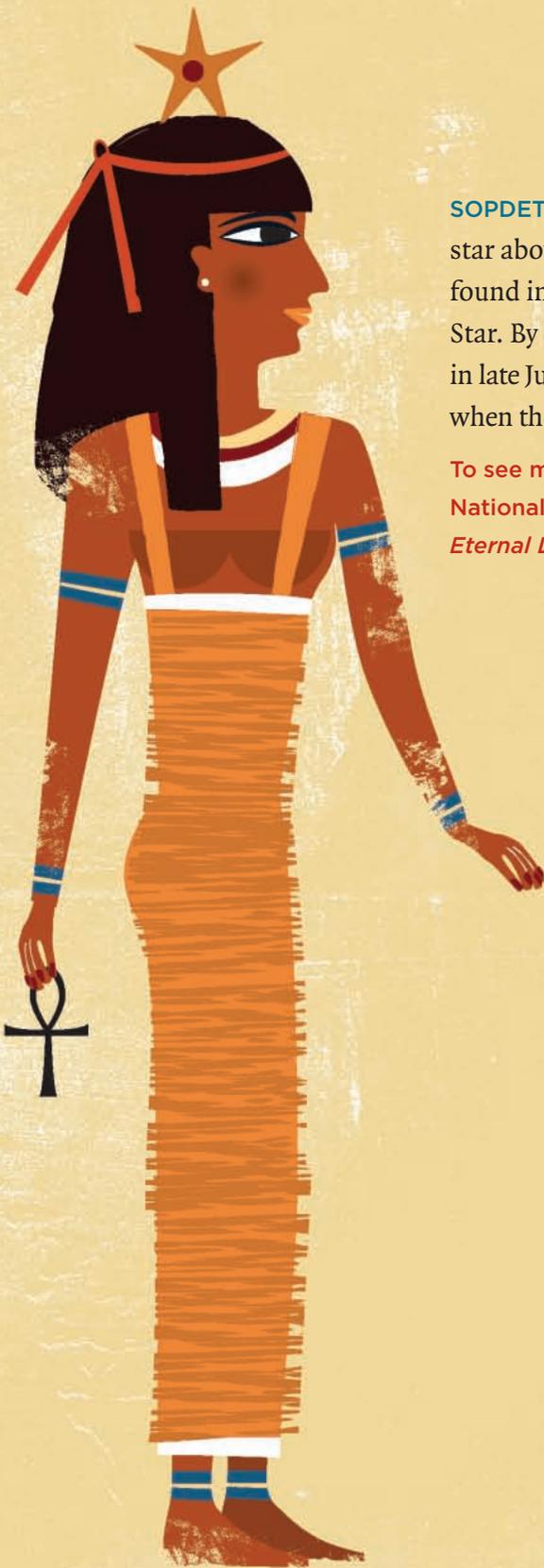
## SHEN

an infinite loop with the sun disk in the center, symbolizing eternity

*Cosmic Wonder!*

What symbols would you choose to represent the sky?



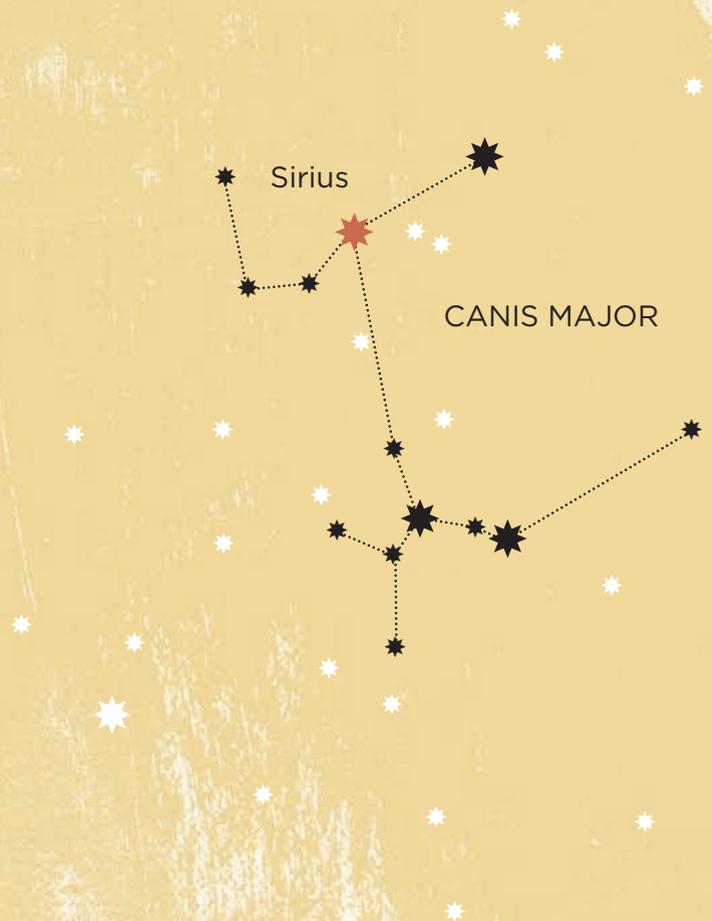


**SOPDET**, A WOMAN WITH A FIVE-POINTED star above her head, represents Sirius. Sirius is found in the constellation Canis Major, the Dog Star. By observing and tracking the rising of Sirius in late July, ancient Egyptians were able to predict when the Nile River would flood each year.

To see more Egyptian artifacts, visit the National Museum of Natural History's exhibition *Eternal Life in Ancient Egypt*.

## Cosmic Wonder!

How do you get information about the weather?



## Celestial Phenomena

IN THE ORIGIN MYTHS of many African societies, the first beings descended from the sky. They often possessed extraordinary powers and served as intermediaries between earth and sky, the worlds of the living and the supernatural.

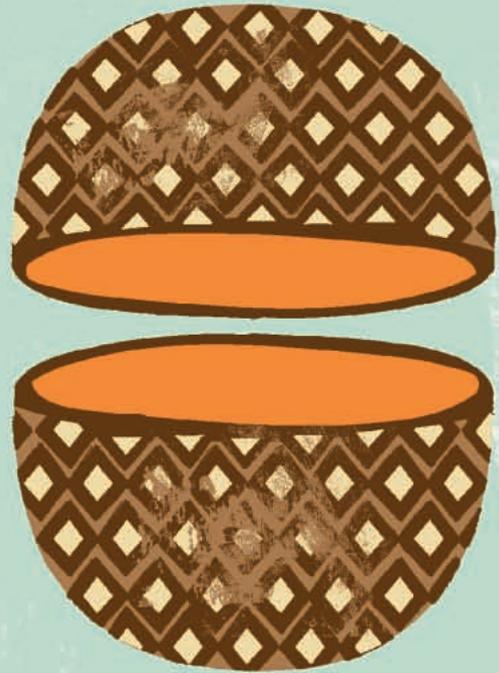
The **YORUBA** peoples of southwest Nigeria envision the cosmos in the form of a lidded calabash or container. The upper half (*orun*) represents the sky where spiritual forces reside; the lower half signifies the earth or the world of the living (*aye*).

The sacred deities (*orisha*) are called to the physical world through various ritual practices. The messenger god **ESHU** aids communication between the world of the living and the spiritual realm of ancestors and spirits.



Staff (*osé Sàngó*) (detail)  
Yoruba peoples, Nigeria  
Late 19th to early 20th century  
Wood with encrusted patina  
62.2 x 22.2 x 3.8 cm  
(24 1/2 x 8 3/4 x 1 1/2 in.)  
Private collection

SHANGO IS THE POWERFUL DEITY WHO CAN CAUSE VIOLENT THUNDERSTORMS AND DEADLY LIGHTNING STRIKES THAT CAN UNEARTH ANCIENT STONES AS EVIDENCE OF HIS POWER.



## Earth and Sky Connections

THE **DOGON** OF MALI picture the cosmos as two disks forming the sky and earth connected by a tree.

The supporting figures in this stool represent the founding spirits (*nommo*) involved in the creation of humankind. Their upraised arms appeal for rain; the pattern along the edges of the disks suggests flowing water.



*left*

Stool

Dogon peoples, Mali

Late 19th to early 20th century

Wood, pigment

36.5 x 32.8 x 31.8 cm

(14 3/8 x 12 15/16 x 12 1/2 in.)

National Museum of African Art,  
Smithsonian Institution, gift of

Walt Disney World Co., a

subsidiary of The Walt Disney

Company, 2005-6-40

*below left*

Wrapper (*adinkra*)

Asante peoples, Ghana

c. 1896

Imported cotton cloth,

black pigment

210 x 302.3 cm

(83 1/16 x 119 1/8 in.)

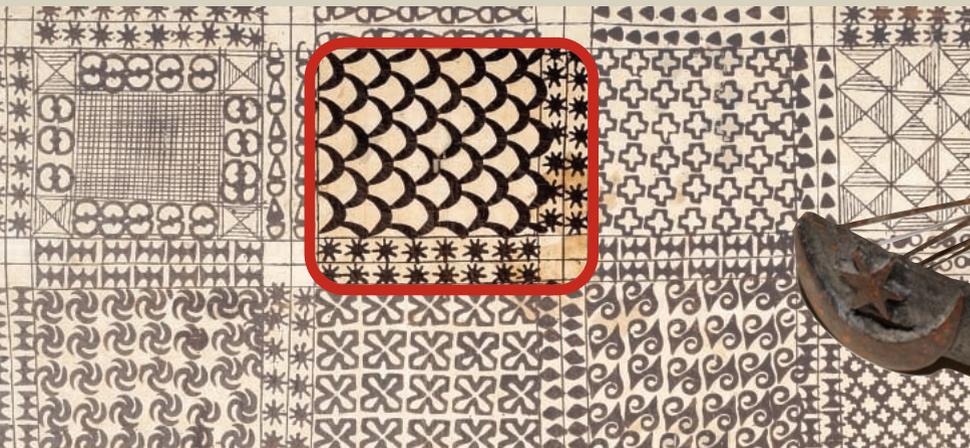
National Museum of African Art,

museum purchase, 83-3-8

## Cultural Cosmology

GHANA'S **AKAN** PEOPLES use celestial symbols to communicate sayings that convey the wisdom of leadership and appropriate behavior within their community.

The stamped designs of Asante *adinkra* cloths are symbols of the Akan cosmos, representing both sky and earth motifs. The crescent moon is a symbol associated with faithfulness; when combined with a star it conveys partnership and cooperation in marriage.



### Cosmic Wonder!

What does the cosmos look like to you? Do all cultures have the same idea?





## Cosmic Wonder!

What do you think they are saying?



Owusu-Ankomah  
b. 1956, Ghana  
*Starkid*  
2007

Acrylic on canvas  
150 x 240 cm (59 1/16 x 94 1/2 in.)  
Collection of the artist and courtesy October Gallery, London

THE CONTEMPORARY ARTIST Owusu-Ankomah depicts three human figures engaged in observing the heavens. They are shown against a backdrop of personal symbols the artist created and traditional Asante *adrinka* symbols.

For more cultural stories connected to star knowledge, visit the Anacostia Community Museum.



Cosmic Byte!

## Star Struck

THE EQUATOR DIVIDES THE EARTH into the Northern and Southern **HEMISPHERES**.

The United States is located in the Northern Hemisphere. The continent of Africa is located in **BOTH** the Northern and Southern Hemispheres.

THE PLEIADES, OR SEVEN SISTERS, is a star cluster associated with the start of the rainy season and agricultural harvest. A symbol of the continuity of life, the constellation is visible in the summer sky in the Southern Hemisphere and in the winter sky in the Northern Hemisphere.

The invention of the **TELESCOPE** in the 17th century revealed previously mysterious phenomena and helped astronomy become a modern science.



## Cosmic Wonder!

Do we see the same stars in different parts of the world?



FIND THE EQUATOR.



## Constellations and Cosmic Phenomena

SOME CONSTELLATIONS and cosmic phenomena are visible **ONLY** in the Southern Hemisphere.

The Coalsack Nebula, an interstellar cloud of dust, hydrogen, and other ionized gases, next to the Southern Cross is framed by the bright background of the Milky Way.



The Southern Cross, or Crux, is one of the smallest but most easily recognized constellations in the southern sky. Explorers used the Southern Cross to navigate the seas and lands in the Southern Hemisphere.

SOUTHERN CROSS



Coalsack Nebula

Musca





## *Cosmic Wonder!*

This Chandra X-ray image shows million-degree gas in the center of the brightest supernova remnant of the Large Magellanic Cloud.



## Star Sounds

LIKE MUSICAL INSTRUMENTS, stars have natural vibrations that produce sound waves. Stars create delicate whistling, drumming, humming, or rumbling sounds through their various frequencies, or speeds of vibration.

LISTEN TO FOUR STAR SOUNDS AT THE STAR STATION. THESE STAR SOUNDS ARE ARTIFICIALLY BOOSTED (VIBRATIONS ARE SPED UP THOUSANDS OF TIMES) SO THAT PEOPLE CAN HEAR THEM.



**Listen! Xi-hydrae is a luminous red star in the constellation Hydra (the serpent). It sounds like African drumming.**

More than 20 MILLION meteoroids enter earth's atmosphere every day!  
Check out the Meteorite Hall and Stellar Stardust at the National Museum of Natural History.



## What's the Big Idea?

COSMIC THEMES IN CONTEMPORARY ART are inspired by questions about the origin of the universe and the place and meaning of human life in the infinite vastness of space. Observations and ideas about the cosmos found in African myths of origin, folktales, and ancient sites of rock art have stirred the imaginations of artists whose artworks reflect the intersection of **ART** and **ASTRONOMY**.

**GAVIN JANTJES** illustrated a Khoi San myth that describes how a girl dancing around an evening fire threw embers into the night sky, where they remained as a wide, shimmering pathway illuminating the Milky Way.

For more cultural stories, explore the exhibition *Our Universes: Traditional Knowledge Shapes Our World* at the National Museum of the American Indian.

The center of the Milky Way as seen from NASA's Chandra X-ray Observatory.



Gavin Jantjes  
b. 1948, South Africa  
*Untitled*  
1989-90

Acrylic on canvas  
200 x 300 cm (78 3/4 x 118 1/8 in.)  
National Museum of African Art,  
Smithsonian Institution, purchased  
with funds provided by the  
Smithsonian Collections  
Acquisition Program, 96-23-1

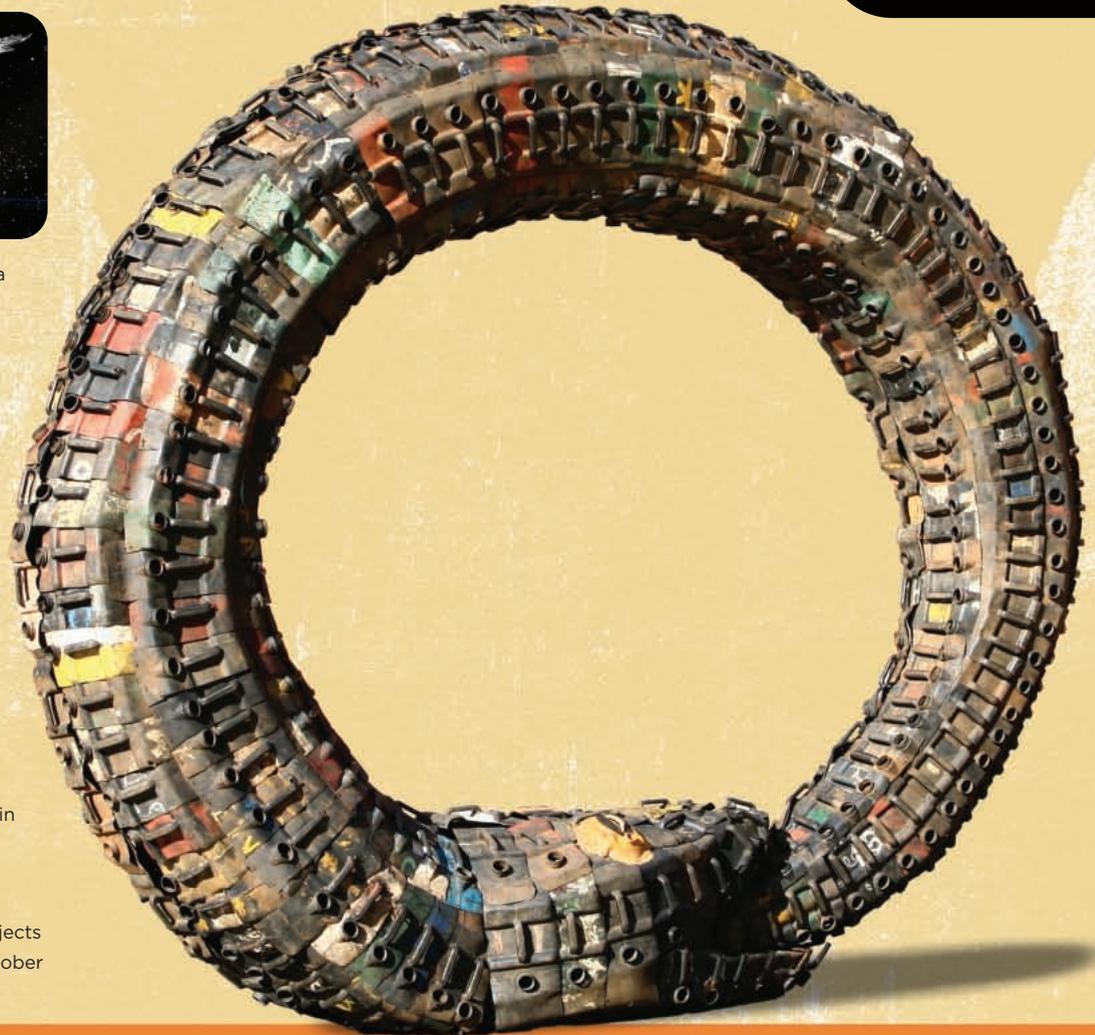
*Cosmic Byte!*

**ROMUALD HAZOUMÈ'S** large mixed-media sculpture of a rainbow serpent swallowing its tail represents infinity and the eternal cycles of life. Made of recycled jerry cans that are used to carry gasoline the *Rainbow Serpent* addresses the exploitation of resources in our world.

Some ancient texts refer to a serpent of light, which resides in the heavens as a snake. The constellations Hydra and Hydrus are represented as snakes. The female **HYDRA** is the largest of the modern constellations. The male **HYDRUS** is a small constellation that is visible only in the Southern Hemisphere. The symbol of a serpent eating its tail is found in many cultures and represents the cyclical nature of the cosmos.

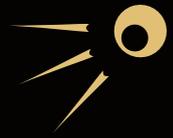


The constellation Hydra



## Cosmic Wonder!

What does a snake represent in your world?



Romuald Hazoumè  
b. 1962, Republic of Benin  
*Rainbow Serpent*  
(*Dan-Ayido-Houedo*)  
2007

Mixed media and found objects  
Courtesy the artist and October  
Gallery, London



Karel Nel  
b. 1955, South Africa  
*Trembling Field*  
2009

Carbon silicate, etched dark  
mirror, water, light  
400 x 200 x 19 cm  
(157 1/2 x 78 11/16 x 7 1/2 in.)  
Collection of the artist

LOOK AT THE ARTWORK *TREMBLING FIELD* BY  
KAREL NEL ON SUBLEVEL 1. GENTLY TOUCH THE  
POOL OF WATER TO IMITATE THE FRAGILE,  
FUGITIVE QUALITY OF LIGHT IN DEEP SPACE.

**KAREL NEL** INVESTIGATES images of light that left their source  
millions of years ago.

Visit *The Evolving Universe* at the National Museum of Natural History.

This page: photograph by John Hodgkiss; opposite page: X-ray photograph NASA/CXC/CfA/M.Markevitch et al.; Optical: NASA/STScI; Magellan/D.Clowe et al.; Lensing Map: NASA/STScI; ESO WFI; Magellan/U.Arizona/D.Clowe et al.

*Cosmic Byte!*

## *Cosmic Wonder!*

This deep space X-ray photograph shows the galaxy cluster 1E 0657-56, also known as the "bullet cluster," which was formed after the collision of two large galaxy clusters. This is the most energetic event known in the universe since the Big Bang.



There are more than 100 billion galaxies in the universe.

# Cosmic Wonder!

Visit the Discovery Room for more cosmic encounters!



Now that you have finished exploring *African Cosmos: Stellar Arts*, complete the following:

I used to think .....

.....

.....

But, now I think .....

.....

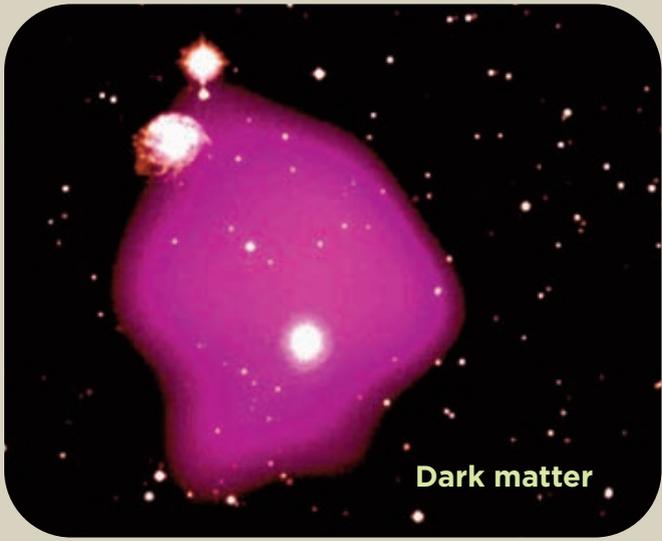
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Let's get thinking in new and unexpected ways!



Dark matter

Scientists believe we can only see about 5% of the matter in the universe—the rest is invisible dark matter and dark energy.

## RESOURCES

Cosmic Journey: History of Cosmology:

<http://www.aip.org/history/cosmology/>

How Big Is Our Universe (pdf download):

<http://www.cfa.harvard.edu/seuforum/howfar/HowBigUniverse.pdf>

Stargazers Photo-share Site:

<http://flickr.com/groups/africanstargazers/>

Opposite page: photograph by Richard Mushotzky (GSFC/NASA), ROSAT, ESA, NASA;  
this page: photograph by Anne Rogers, illustration by Katrien Kolenberg



BE INSPIRED! JOIN YOUR LOCAL ASTRONOMY CLUB! CREATE A COSMIC WORK OF ART!

South African astrophysicist Thebe Medupe lecturing with his childhood telescope



For more information about the exhibition, visit [africa.si.edu/exhibits](http://africa.si.edu/exhibits)



Smithsonian  
National Museum of African Art

950 Independence Avenue SW, Washington, D.C. [africa.si.edu](http://africa.si.edu)

## *Aim high!*

Imagination will often carry us to worlds that never were. But without it we go nowhere.

—Carl Sagan