



National Museum of African Art

*African Cosmos: Stellar Arts*

*June 20, 2012 through December 6, 2012*



*Astronomic Arts Lesson Plans,  
Grade 1 through Grade 4*

Exhibit-related lessons and activities for the classroom and home

# ASTRONOMIC ARTS

*African Cosmos: Stellar Arts, June 20-December 6, 2012*  
National Museum of African Art

## Schedule a Tour

***To schedule a tour please call Frank Esposito at 202-633-4633 or email him at [espositof@si.edu](mailto:espositof@si.edu).***

*Tours are subject to docent availability.*

*Ask about our hands-on Jambo! School Tours for younger students. Thematic Tours and Highlights Tours are also available.*

*Art Workshops and Outreach Programs are offered upon request.*

*Please see [www.africa.si.edu](http://www.africa.si.edu) for more information.*

## Contents

### Lessons:

1. Symbols of the Sky:  
*Adinkra* Stamping.....pg 3
  2. Scratching the Surface:  
Scratchboard Art..... ..pg 7
  3. Creation Masks and Masquerades.....pg 11
- Appendix A: Object Descriptions.....pg 15
- Appendix B: Suggested Reading List/  
Additional Resources.....pg 18
- Appendix C: Learning Standards.....pg 20

# Lesson 1: Symbols of the Sky– *Adinkra* Stamping



In this lesson, students will become familiar with the art of *adinkra* stamping and create their own symbol to turn into a stamp.

Estimated Time: 60 minutes (plus time for drying)

## Lesson Objectives:

- Become familiar with the art of stamp-making of the Asante and Akan peoples of Ghana
- Explore the meaning and significance of symbols in everyday life
- Create a personal cosmos-related symbol that will be converted into a stamp

## Materials:

- Examples of well-known symbols (i.e. stop sign, heart, flag)
- Paper for sketching
- Craft foam
- Small wooden blocks or squares of sturdy cardboard
- Pencils/pens
- Scissors
- Double-sided tape or glue

## Key Terms:

*Adinkra*: visual symbols created by the Asante and Akan people of Ghana, often made into stamps and used in printing

Gourd: dried, hollowed out pumpkin or squash

Images from “Images for *Astronomic Arts* Lesson Plans, Grades, 1-4, PowerPoint (Africa.si.edu):

- Image 1: Cloth wrapper (with *adinkra* stamps)
- Images 2-5: *Adinkra* stamps of star, moon/star, galaxy, and sun
- Reference Slides 1-2: *Adinkra* Symbols of the Sky



## Background Information

The Asante people of Ghana use *adinkra* to express the connection between the verbal and the visual. *Adinkra* symbols appear on jewelry, brass weights and, most often, as two-dimensional stamped designs to decorate cloth. Historically, *adinkra* was reserved for Asante kings. Over the years, however, its use has expanded to the general Akan population who wear *adinkra* cloth on significant occasions, such as funerals. (*Adinkra* means ‘goodbye’ in Twi.)

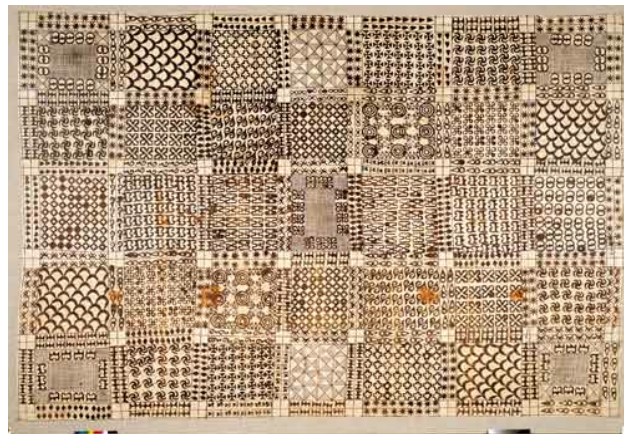
Of the hundreds of *adinkra* signs and meanings that have been documented, the older symbols are most often linked to proverbs, folktales, folksongs and popular sayings. Newer designs are associated with more common themes, such as nature, and everyday objects.

*Adinkra* cloth was traditionally printed from hand-carved stamps made from gourds. The ink came from the bark of the *badie* tree and the roots of the *kuntunkuni* tree. Because the ink wasn’t permanent the cloth couldn’t be washed, but now permanent ink is used.

NOTE: Please see Appendix A, Object Descriptions, for more information.

## Introductory Discussion

Bring in examples of well-known symbols. They can be on actual objects or simply printed from the Internet. Hold up each of the symbols individually. Ask the class, “What does this mean?” “How do you know?” We depend on symbols for lots of things. Find symbols around your classroom and discuss what they mean. Show students Images 2-5 (*adinkra* stamps). Talk about the symbolism of the stamps. More symbols are listed on the following page (also on Reference Slides 1-2 of the PowerPoint), titled *Adinkra Symbols of the Sky*. Additional symbols and information can be found online at [http://www.adinkra.org/htmls/adinkra\\_index.htm](http://www.adinkra.org/htmls/adinkra_index.htm) and [http://www.stlawu.edu/gallery/education/f/09textiles/adinkra\\_symbols.pdf](http://www.stlawu.edu/gallery/education/f/09textiles/adinkra_symbols.pdf).)



Cloth Wrapper with *adinkra* stamps, Asante peoples, Ghana, Mid to late 19th century

## Activity



Procedures:

1. Begin by having students choose one word to describe themselves and write it down on a piece of paper. (For example, the word *smart*.)
2. Give the students 5-10 minutes to design a simple symbol that represents that word. Make sure that it is something that it is a design that won’t be too difficult to cut out. (For the word *smart*, you could create a symbol that looks like a bright star.)
3. Copy the sketch onto a piece of foam with a pen.
4. Cut out the design.



5. Glue the foam design onto a small woodblock. Wait for it to dry.
6. Apply ink or paint to your stamp.
7. Print your stamp onto your cloth. Trade with other classmates to create a pattern using different stamps.

**Mixing in Math:** The cloth can be used in a multiplication lesson if students create grid-like patterns. Count the number of symbols along the top and side to know which two numbers to multiply together for the number of total symbols. Combine the number of symbols from several cloths to create more complex mathematical equations for older students.



***Adinkra Symbols of the Sky***  
**with proverbs from West Africa**  
**(Also in “Images for Elementary Lesson Plans” PowerPoint )**

Moon and the Star  
 (love, faithfulness, harmony)



Star/Child of the Heavens  
 (“A child of the Supreme Being I do not depend on myself. My illumination is only a reflection of His.” guardianship)



God is in the Heavens  
 (“God, there is something in the heavens, let me reach it.” hope)



Moon  
 (“It takes the moon sometime to go round the nation.” patience, understanding)



Rays  
(cosmos omnipresence)

Sun  
(vitality, procreative or cosmic energy,  
growth, enlightenment)

Morning Star  
(transformation, a new beginning)



#### Sources

- [http://www.adinkra.org/htmls/adinkra\\_index.htm](http://www.adinkra.org/htmls/adinkra_index.htm)
- [http://www.africawithin.com/tour/ghana/adinkra\\_symbols.htm](http://www.africawithin.com/tour/ghana/adinkra_symbols.htm)
- [http://www.7adinkras.com/index.php?option=com\\_content&view=article&id=93&Itemid=40](http://www.7adinkras.com/index.php?option=com_content&view=article&id=93&Itemid=40)

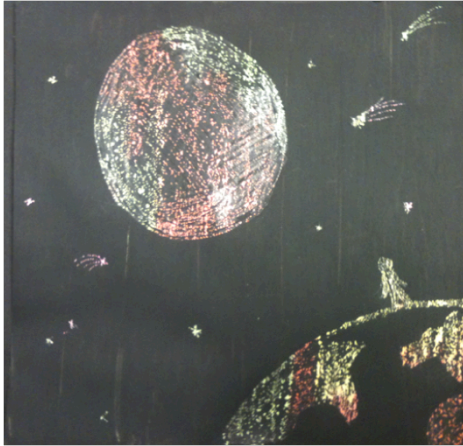
#### Reflection:

- What are the benefits of using symbols? What limitations are there?
- What makes a good symbol?
- In what contexts are symbols most effective? Less effective?
- What do you want to learn more about?

#### Evaluation (On scale of 1-5, 5 being the highest)

- Did the student engage appropriately during the opening discussion?
- Did the student follow directions?
- Did the student do his/her best to create an *adinkra* stamp?
- Can the student accurately explain his/her symbol to others?

## Lesson 2: Scratching the Surface— Scratchboard Art



In this lesson, students will learn about the work of contemporary artists, Gavin Jantjes and Garth Erasmus, and create their own artwork based on a creation myth.

Estimated Time: 60 minutes (or 2 30-minute class sessions if you use ink or paint to allow for drying time)

### Lesson Objectives:

- Identify the work of Gavin Jantjes and Garth Erasmus
- Look to the work of Gavin Jantjes and Garth Erasmus to inspire a cosmos-related piece of art
- Experiment using art materials in an untraditional way

### Materials:

- Creation myth storybook (See Appendix B, Suggested Reading List/Additional Sources)
- Poster board (cut into pieces, approx. 5" x 5", one for each student)
- Crayons
- Optional: black India ink, foam brushes
- Optional: star stickers
- Nails, toothpicks, or pushpins

### Key Terms:

San: indigenous people of South Africa

Zulu: ethnic group of South Africa

Myth: an invented story, idea, or concept

### Images from "Images for Lesson Plans, Grades 1-4, PowerPoint (Africa.si.edu):

- Image 6: *Untitled*, Gavin Jantjes, 1989-1990
- Image 7: *Untitled*, Garth Erasmus, 1996



### Background Information on Gavin Jantjes



*Untitled*, Gavin Jantjes, 1989-90

This painting by Gavin Jantjes is based on a myth told by the San people of South Africa. The artist was inspired by the San people's strong tradition of telling stories. He based this work on one woman's telling of a creation myth of the stars and Milky Way.

In the story, a young girl reaches into the fire and throws burning coals into the sky. The coals form the stars and the white ashes become the Milky Way. The sky is the focus of this painting and Jantjes created the Milky Way by using a grayish paint against the darker sky. The outlines of people on the bottom half of the work are drawn in the style of Khoi San rock art. This painting is part of the Zulu series. In English, the word *Zulu* means "the space above your head" or "the heavens."

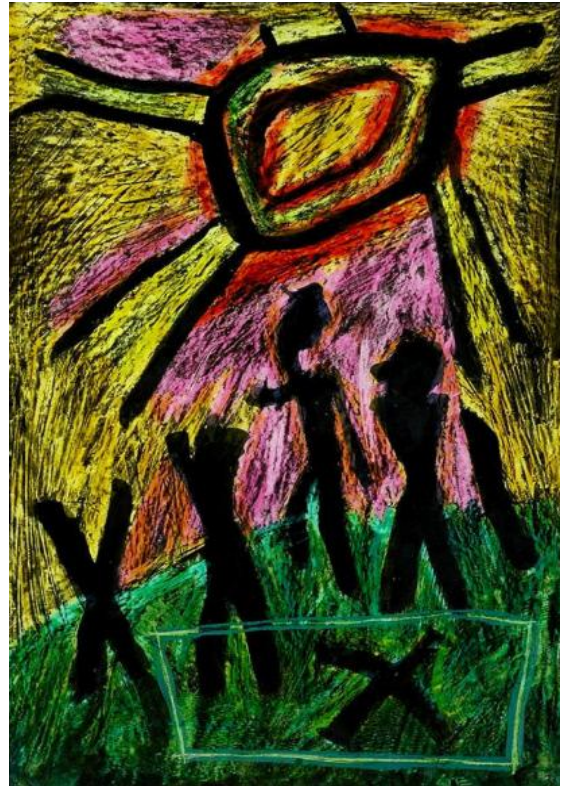
### Background Information on Garth Erasmus

The artist captures in this painting the primal yet timeless human response to the awe-inspiring power of the sun, upon which all life depends, and ponders the meaning of human life within the vastness of space.

Garth Erasmus sees his work in the service of education and social healing. He employs collage and graffiti, suggestive of urban arts of resistance during the time of apartheid.

Erasmus taught art for many years before becoming a full-time artist. After receiving an art teacher's diploma from Hewat College in Cape Town, Erasmus entered an art program at Rhodes University in Grahamstown. In 1988 his work reached the South African mainstream in the exhibition *Neglected Tradition: Towards a New History of South African Art (1930–1988)* at the Johannesburg Art Gallery.

NOTE: Please see Appendix A, Object Descriptions, for more information.



*Untitled*, Garth Erasmus, 1996

## Introductory Discussion

Introduce the painting by Gavin Jantjes (Image 6). Ask the following questions to help the students look more closely at the work:

- What do you see in the painting?
- What do you think is going on?
- Do you like it? Why or why not? How would you change it?
- How would you describe the figures?
- The painting is untitled. What would you title it?

Then tell the students the myth that inspired the artist to make this work.

- How does knowing the story behind the work give it more meaning?
- With the painting's background in mind, would you title it something different?
- Why do you think the artist wanted to do a painting of a myth?

Introduce the painting by Garth Erasmus (Image 7). Ask the following questions to help the students look more closely at the work:

- What do you see in this painting?
- What do you think is going on?
- Do you like it? Why or why not? How would you change it?
- How would you describe the figures?
- The painting is untitled. What would you title it?
- What materials did the artist use to create this piece? (crayons and acrylic)
- What do you think about crayons being used in "fine art"?
- What similarities do you notice between this piece and the Jantjes piece?
- What differences do you notice?

## Creation Myths

Read a creation myth as a class. (See Appendix B, Suggested Reading List/Additional Sources.)

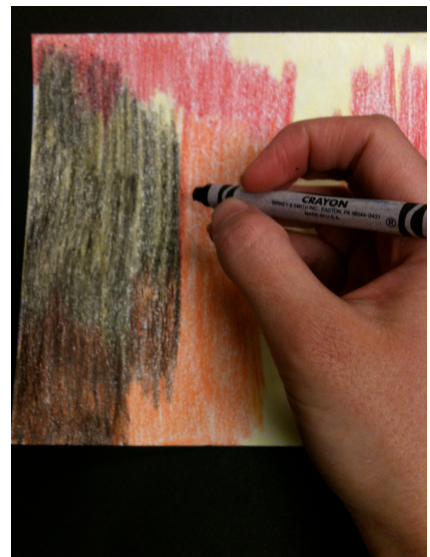
- What is the purpose of myths? Are they important? Why or why not?

Explain to the students that they are now going to have the opportunity to create a visual representation of the San myth or the myth you just read as a class.

## Activity

Procedures:

1. Pass out pieces of poster board and crayons. Color large areas of the paper different colors until the whole piece of paper is covered. Bright colors work especially well for this project. Encourage students to color heavily for best results.
2. Option 1: Paint over the crayon with black acrylic paint or India ink until you can't see the colors underneath. (Dry overnight.)  
Option 2: Use a black or dark crayon color completely color over the colors
3. Invite students to illustrate the creation myth you just read together as a class or the myth that inspired Jantjes' work.
4. Use a toothpick or other relatively sharp object to scratch into the black surface, revealing the colors beneath.



NOTES: For more information and examples of scratchboard art, go to <http://www.princetonol.com/groups/iad/lessons/elem/elem24.html>. See <http://africa.si.edu/exhibits/gavinjantjes.html> for additional lesson ideas related to Gavin Jantjes.

**Reflection:**

- What myths are associated with your culture? Create a scratchboard drawing relating to a myth from your own culture.
- How do you pass on memories, stories, or other important information?
- How does the use of computers and technology affect oral traditions?

**Evaluation (On scale of 1-5, 5 being the highest)**

- Did the student engage appropriately during the opening discussion/story?
- Did the student follow directions?
- Did the student do his/her best to create a drawing?
- Can scratchboard the student accurately explain his/her work to others?
- Can the student define “myth”?



## Lesson 3: Creation Masks and Masquerades

In this lesson, students will learn about the role of masks in creation masquerades. Students will read Africa creation myths, write their own screenplays of a myth, and make masks to represent the characters in the myth. They will then perform their skits wearing the masks they created.



Estimated Time: 2-3 60-minute class periods

### Lesson Objectives:

- Recognize that visual and performing arts can be combined to create cultural traditions.
- Create symbolic masks with a variety of materials to be used in a skit about the creation of the earth.

### Materials:

- One or more creation myths (see Appendix B, Suggested Reading List/Additional Resources)
- Paper
- Pencils
- Various mask-making supplies
  - Cardboard boxes (cereal boxes work well)
  - Scissors, tape, glue
  - Markers, paint
  - Construction paper
  - Raffia
  - Beads, shells

### Key Terms:

**Masquerade:** a rite or cultural even that usually involves costumes, music and dancing

**Myth:** an invented story, idea, or concept

## Images from “Images for Lesson Plans, Grades 1-4, PowerPoint (Africa.si.edu):

- Image 8: Face mask (*Kanaga*)
- Image 9: Face mask (*Bedu*)
- Images 10-11: Crest masks (*Chi wara*)

### Background Information

Many groups in Africa, and around the world, participate in dramatic performances called *masquerades*. These events occur in conjunctions with funerals, initiations, religious ceremonies, or entertainment. A *masquerade* often consists of masks, music, and dancing. A “mask,” in this context, refers to not only the object that disguises the face, but also any costume or props that goes with it. Museums usually display the headpiece of the mask often made out of a combination of wood, cloth, and/or raffia. There are several different kinds of masks.

Helmet mask: worn over the whole head

Crest mask: worn on top of the head

Face mask: worn over the face

Forehead masks: worn resting on the forehead

Some masks look like humans, others look like animals, and some look like a combination of the two and reference supernatural creatures with special abilities from dreams or myths. When a mask is worn, the wearer becomes dances and acts as if he were the person/creature in the mask. He can “speak” through the music being played or sing in a secret language that only the initiated understand.

Show students images of different kinds of masks mentioned above and discuss them as a class. Use the following questions to get the students thinking about each piece.

### Three Examples of Masks

#### 1. *Kanaga* mask, Dogon, Mali

The Dogon people of Mali perform a masquerade to celebrate the creation of the earth with a *kanaga* masks. In the performance, the dancer symbolically becomes the Creator, Amma, and makes a figure eight, touching the tip of the mask to the ground in the four cardinal directions. The upper crossbar is said to represent the sky and the lower bar, the earth.



2. *Bedu* mask, Nafana, Cote d'Ivoire

This mask is performed in a masquerade according to a lunar cycle, usually in a pair. A smaller male mask often has crescent-shaped horns and is danced with quick unpredictable steps while the larger female mask usually has a disk superstructure and is danced with slow and graceful movements. *Bedu* masks can be performed at the beginning or the end of the year celebration to remember ancestors.



3. *Chi wara* crest mask, Bamana, Mali

The *chi wara* mask is often described as an antelope, but it is actually a composite animal made up of the antelope, armadillo and pangolin. It has the neck, horns, eyes and mane of an antelope, but the body of an armadillo, and the scales of a pangolin. These three animals all dig up the earth: antelopes cut the ground with their hooves, while both the armadillo and pangolin use their claws to open termite mounds. *Chi wara* is the name of the supernatural being believed to have taught the Bamana peoples to farm. Young men used to wear male and female pairs of masks in a dance performance to teach and praise good farmers. Today, the masquerade is performed most often for entertainment.



NOTE: Please see Appendix A, Object Descriptions, for more information.

### Introductory Discussion

Begin by getting the students to think of how masks are part of their own experiences.

- When do you wear a mask? (e.g. sports, Halloween, performances)
- Why do you wear a mask?
- How do you feel when wearing a mask?

Show Images 7-11 of different masks and ask the following questions.

- What shapes do you see?
- What colors did the artist use?
- What materials were used?
- Does it look like anything familiar?
- What might the mask represent?
- How do you think it was worn?
- What else do you wonder about this mask?



## Activity

### Procedures:

1. Divide students into groups of 3-5. Assign each group a different creation myth to read.
2. Students will then turn the creation myth they read into a short skit. As a group they will decide who the characters in the story are and create their own screenplay. Select one student in each group to be the scribe. (For a more extended lesson, have the students also identify the exposition, rising action, climax, falling action, and resolution of the myth.)
3. Once students have a simple script ready, they can begin rehearsing and making their masks. Have various supplies available to encourage creativity.
4. Students will do a dress rehearsal with their masks. When they are ready, have the students perform for the rest of the class or another audience.

### Reflection:

- What did you enjoy about the process of turning a myth into a skit? What was most difficult?
- What did you learn from this activity?
- Compare and contrast the students' skits in a class discussion.
- How are the masks you made similar to the museum's mask(s)? How are they different?
- Write down your own ideas and/or beliefs related to the creation of the earth and sky.

### Evaluation (On scale of 1-5, 5 being the highest)

- Did the student engage appropriately during the opening discussion?
- Did the student follow directions?
- Did the student work well in his/her group?
- Did the student participate in the group skit?
- Did the student reflect on his/her experience?

# Appendix A: Object Descriptions

**OBJECT IMAGES CAN BE FOUND ONLINE AS PART OF A POWERPOINT PRESENTATION AT [WWW.AFRICA.SLE.U/EDUCATION](http://WWW.AFRICA.SLE.U/EDUCATION).**

## **Image 1: Cloth wrapper (with adinkra stamps)**

*Asante peoples, Ghana*

*Mid to late 19th century*

*Imported cotton cloth, black pigment*

*National Museum of African Art, Smithsonian Institution, museum purchase, 83-3-8*



In this rare *adinkra* cloth, clusters of crescent moons and stars join a host of ‘terrestrial’ motifs to communicate strength and resiliency in the face of upheaval. Asante king Agyeman Prempeh I (ruled circa 1888–1931) wore this cloth in January 1896 to the meeting with British authorities at which he was deposed, arrested, and exiled to Sierra Leone and later to the Seychelles.

Eighteen symbols decorate the cloth that Prempeh chose to wear that fateful day, communicating the king’s power as well as his awareness that the British threatened his reign and the kingdom. The moon and stars reference the reliability of the king (star), which is more constant than the changing phases of the moon. Along the central block motifs include:

- Double curve ram’s horns: leadership, strength, and humility, and evoking the proverb, “When the horns of two rams clash in a fight, one must give way to another.”
- *Dono* drum: played at royal processions to denote authority.
- “Castle” and “wind house”: strength and resiliency of the Asante nation during stormy, unsettling times.

In combination, the constellation of symbols on this royal *adinkra* cloth signaled – to those literate in this graphic language – the king’s recognition that his control of the kingdom was imperiled, but that the Asante nation would endure despite setbacks at this difficult moment in their history.

## **Images 2-5: Stamps for making *adinkra* designs**

*Asante peoples, Ghana*

*Mid-20th century*

*Gourd, pigment*

*National Museum of African Art, Smithsonian Institution, gift of the Roy and Brigitta Mitchell Collection*



The moon is a feminine symbol associated with faithfulness. The star recalls a proverb emphasizing the importance of faith and reliance on others: “Like the star, the child of the Supreme Being, I rest with God and do not depend upon myself [alone].” When moon and star are combined,

**Images 6: *Untitled*, Gavin Jantjes**

*b. 1948, South Africa*

*Untitled*

*1989-1990*

*Acrylic on canvas*

*National Museum of African Art, Smithsonian Institution, purchased with funds provided by the Smithsonian Collections Acquisition Program, 96-23-1*



A Khoi San myth recounts how a girl dancing around an evening fire threw glowing embers into the night sky, where they remained as a wide, shimmering pathway illuminating the celestial firmament – the Milky Way. To set the historic frame of deep time, the artist has rendered the dancing figures in a style reminiscent of southern Africa’s ancient rock paintings.

Raised in Cape Town’s District Six, Gavin Jantjes received his masters of arts from the Hochschule für Bildende Künste in Hamburg, Germany. Rather than returning to a South Africa under apartheid, Jantjes stayed in Europe where he became a founding member of the German anti-apartheid movement, later served as a consultant for the United Nations High Commissioner for Refugees, and became an active participant in the British arts community. He now lives and works in Norway.

**Image 7: *Untitled*, Garth Erasmus**

*b. 1956, South Africa*

*Untitled*

*1996*

*Acrylic and crayon on paper*

*National Museum of African Art, Smithsonian Institution, gift of Lee Lorenz in memory of Philip L. Ravenhill, 97-23-2*



**Image 8: Kanaga mask**

*Face mask (kanaga)*

*Dogon peoples, Mali*

*Mid-late 20th century*

*Wood, pigment*

*National Museum of African Art, gift of Walt Disney World Co., a subsidiary of The Walt Disney Company  
2005-6-533*



The crossbar superstructure of Dogon *kanaga* masks may reflect the opposing, yet connected domains of sky and earth. In performance, the dancers reportedly touched the tip of the mask to the earth in the four cardinal directions. The masks appear at funerals to lead the soul of the deceased to the afterlife.



### Image 9: Bedu mask

Face mask

Nafana peoples, Bondoukou region, Côte d'Ivoire, Ghana

Mid-20th century

Wood, paint, metal

National Museum of African Art, Smithsonian Institution, gift of Walt Disney

World Co., a subsidiary of The Walt Disney Company, 2005-6-45



*Bedu* masks are performed according to a lunar cycle. The typically tall and brightly colored plank masks appear in pairs, a smaller male mask, often identified by crescent-shaped horns and quick and unpredictable actions, and a larger female mask, usually depicted with a disk superstructure and by slow and graceful movements when performed.

*Bedu*, which are found among the Nafana and neighboring groups around the region of Bondoukou in Côte d'Ivoire and Ghana, may be performed to mark the beginning or the end of the dry season, the latter to announce the rains. They are also performed for communal end-of-year festivals associated with important ancestors and the founding of villages and, more recently, at political events.

### Image 10-11: Crest masks (chi wara)

Bamana peoples, Mali

Early 20th century

Wood, metal

National Museum of African Art, Smithsonian Institution, gift of Walt

Disney World Co., a subsidiary of The Walt Disney Company, 2005-6-12



The elaborate openwork mane of male antelope crests pieces is said to recall the path the sun takes as it moves across the sky each day. The design, from a particular *Bamana* stylistic region, also suggests the antelope's zigzag escape when pursued. The crests honor *Chi wara* (also spelled *Ci-wara* or *tyi wara*), the mythic being who taught the *Bamana* how to farm. The animals represented in *Chi wara* crests are primarily the Roan antelope (*Hippotragus equines*) for the male, said to represent the sun, and the Oryx antelope for the female, said to represent the earth, although the anteater and pangolin may also be referenced. Throughout Africa where farming continues to be a predominant occupation, the importance of the sun to life and to a successful harvest is recognized in many creative ways.

## Appendix B: Suggested Reading List/ Additional Resources

### Books

#### Education Reference

Glorieux-Desouche, Isabelle, and Phoebe Dunn. *How to Talk to Children about World Art*. London: Frances Lincoln, 2010.

#### Creation Myths

Anderson, David. *The Origin of Life on Earth*. Maryland: Sights Productions, 1996.

Bryan, Ashley. *The Story of Lightning and Thunder*. New York: Macmillan Publishing Company, 1993.

Dayrell, Elphinstone. *Why the Sun and the Moon Live in the Sky*. Boston: Houghton Mifflin, 1968.

Elkin, Benjamin. *Why the Sun was Late*. New York: Parents' Magazine Press, 1966.

Gatti, Anne. "Why the Moon Comes Out at Night." *Tales from the African Plains*. London: Puffin Books, 2001.

Gerson, Mary-Joan. *Why the Sky is Far Away*. Boston: Little Brown and Company, 1974.

Mollel, Tololwa M. *A Promise to the Sun*. Boston: Little Brown and Company, 1992.

Riordon, James. *The Coming of Night: A Yoruba Creation Myth from West Africa*. London: Frances Lincoln Limited, 1999.

Roth, Susan L. *Fire Came to the Earth People*. New York: St. Martin's Press, 1988.

Snyman, Maritha, Bheki Ntuli, and Danisile Ntuli. *The Crocodile Who Swallows the Sun and Other Stories of the Southern Sky: Ancient Stories of the Earth, Sun, Moon and Stars Re-told for Today's Children*. South Africa: Southern Science, 2006.

Stewart, Dianne. *The Gift of the Sun: A Tale from South Africa*. London: Frances Lincoln Children's Books, 2007.

#### Constellation Myths and Other Books for Children

Driscoll, Michael. *A Child's Introduction to the Night Sky: The Story of the Stars, Planets, and Constellations—and How You Can Find Them in the Sky*. New York: Black Dog and Leventhal

Mitton, Jacqueline. *Zoo in the Sky: A Book of Animal Constellations*. Iowa: National Geographic Children's Books, 2006.

Winter, Jeanette. *Follow the Drinking Gourd*. New York: Random House, Inc., 1988.

### Books in Braille

Grice, Noreen Simon Steel, and Doris Daou. *Touch the Invisible Sky*. Puerto Rico: Ozone Publishing, 2007.

Grice, Noreen. *The Little Moon Phase Book*. Puerto Rico: Ozone Publishing Corporation, 2005.

### **Teacher Guides and Online Activities**

Chandra X-Ray Observatory

<http://chandra.harvard.edu/edu/>

NASA---Educational Materials

<http://www.nasa.gov/education/materials>

How Big is Our Universe? An Exploration Through Space and Time (Booklet)

Produced by the NASA-SAO Education Forum on the Structure and Evolution of the Universe. 2009. PDF available at: [http://www.cfa.harvard.edu/seuforum/howfar/HowBig\\_PFriendly.pdf](http://www.cfa.harvard.edu/seuforum/howfar/HowBig_PFriendly.pdf)

National Museum of African Art

<http://africa.si.edu/exhibits/teachers.html>

# Appendix C: Learning Standards

## **Lesson 1: Symbols of the Sky—Adinkra Stamping**

### Grades: K-4

1. Content Standard: Understanding and applying media, techniques, and processes

Achievement Standard:

c. Use different media, techniques, and processes to communicate ideas, experiences, and stories.

d. Use art materials and tools in a safe and responsible manner.

3. Content Standard: Choosing and evaluating a range of subject matter, symbols, and ideas.

Achievement Standard:

a. Explore and understand prospective content for works of art.

b. Select and use subject matter, symbols, and ideas to communicate meaning.

4. Content Standard: Understanding the visual arts in relation to history and cultures

Achievement Standard:

a. Know that the visual arts have both a history and specific relationships to various cultures.

b. Identify specific works of art as belonging to particular cultures, times, and places.

## **Lesson 2: Scratching the Surface—The Work of Gavin Jantjes**

### Grades K-4

1. Content Standard: Understanding and applying media, techniques, and processes

Achievement Standard:

1.c. Use different media, techniques, and processes to communicate ideas, experiences, and stories.

1.d. Use art materials and tools in a safe and responsible manner.

4. Content Standard: Understanding the visual arts in relation to history and cultures

Achievement Standard:

a. Know that the visual arts have both a history and specific relationships to various cultures.

b. Identify specific works of art as belonging to particular cultures, times, and places.

## **Lesson 3: Creative Creations—Masquerades**

### Grades K-4

1. Content Standard: Understanding and applying media, techniques, and processes

Achievement Standard:

1.c. Use different media, techniques, and processes to communicate ideas, experiences, and stories.

1.d. Use art materials and tools in a safe and responsible manner.

3. Content Standard: Choosing and evaluating a range of subject matter, symbols, and ideas.

Achievement Standard:

a. Explore and understand prospective content for works of art.

b. Select and use subject matter, symbols, and ideas to communicate meaning.

4. Content Standard: Understanding the visual arts in relation to history and cultures  
Achievement Standard:
  - a. Know that the visual arts have both a history and specific relationships to various cultures.
  - b. Identify specific works of art as belonging to particular cultures, times, and places.
6. Content Standard: Making connections between visual arts and other disciplines
  - a. Understand and use similarities and differences between characteristics of the visual arts and other arts disciplines.
  - b. Identify connections between the visual arts and other disciplines in the curriculum.