# *African Cosmos: Stellar Arts*

# Formative Evaluation with School Focus Groups

*Anything about Africa in a museum is just exciting because in our textbooks there is so little information about Africa. In general youth are very ignorant about Africa. Any outside source we can look at is great. (*Washington, DC area high school student)

**Smithsonian Institution**

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## Acknowledgments

The formative work to develop a Gallery Guide for the *African Cosmos: Stellar Arts* exhibition was a truly collaborative undertaking. Team members Deborah Stokes and Reema Ghazi from the African Art museum, Jeff Meade from the Postal Museum, and Kathleen Ernst, Ioana Munteanu, and Andrew Pekarik from the Office of Policy and Analysis jointly generated ideas for how to encourage group discussions with area high school and middle school students that would elicit useful information on that demographic's understanding of Africa, art, astronomy, and museums, what would draw them to come see the exhibition, and what would interest them once they were in it. Each member of the team was generous with his or her particular knowledge and talents in conducting the focus groups and writing this report.

Special thanks go to the 37 students from School Without Walls, Thomas Jefferson High School, and Howard University Middle School who astounded us with their grasp of the subject areas and delighted us with their colorful stories, pertinent examples, and general willingness to share their knowledge and ideas. Thanks too to the teachers and school administrators who invited us into their schools and helped arrange the sessions.

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## Introduction

*African Cosmos: Stellar Arts*, scheduled to open at the National Museum of African Art (NMAfA) on June 20, 2012, explores the historical legacy of African cultural astronomy and the ways that celestial bodies and phenomena serve as inspirations and symbols in the creation of both traditional and contemporary African arts. The exhibition explores indigenous African knowledge of the universe and its relationship and relevancy to Western astronomy.

Collaborative programming around the *African Cosmos* exhibition involves an interdisciplinary mix of Smithsonian staff and scholars from art and non-art museums, as well as the Smithsonian Astrophysical Observatory. The focus of this study and report is the African Cosmos Gallery Guide that will highlight art + astronomy connections.

Charged with shaping an experience that is accessible to a broad audience, educators at NMAfA are particularly interested in the teen demographic since that cohort is the next generation of museum-goers. To assist the African Cosmos collaboration in developing a Gallery Guide that will be accessible to teens and will address what most interests them and sparks their curiosity, NMAfA Education Specialist Deborah Stokes requested the Office of Policy and Analysis (OP&A) to conduct focus groups with area high school and middle school students. Three focus groups were scheduled to begin after school and last for approximately one hour at the following schools:

- School Without Walls, Washington, DC, Wednesday, March 7
- Thomas Jefferson High School, Alexandria, VA, Wednesday, March 14
- Howard University Middle School of Mathematics and Science, Washington, DC, Wednesday, March 21

### *Methodology*

OP&A staff worked with African Cosmos collaborators from NMAfA and the National Postal Museum to design focus group activities that would best draw out participating students' knowledge about Africa, art, and astronomy, and to encourage their inputs about the exhibition. An exercise was designed whereby students were given a set of 31 images, including some objects from the exhibition, and told to select around six images and use them to tell a story – an "exhibit" – about Africa to an audience of their peers. These presentations would be followed up with Q & A and more general discussion on the topics of interest. The Cosmos team was particularly interested in knowing:

#### ***What are the students' assumptions/prior knowledge about Africa?***

- Which images most/least visualize their ideas about Africa and why?

- Where did their ideas about Africa come from?

***What do they know about astronomy?***

- Do they know what the astronomy-related images depict?
- Do they relate the science of astronomy with Africa?

***What would they like to learn?***

- Which images most spark their curiosity?
- Which objects would they want to see in an exhibition/learn more about?

***What is their experience with museums?***

- What have their experiences in a museum been like?
- What would help their experiences?

NMAfA Education Specialist Deborah Stokes worked with her contacts at the three schools (including a NMAfA student intern from School Without Walls) to enlist students. Students at School Without Walls (Walls) and Thomas Jefferson High School (TJHS) were high school juniors and seniors; those from Howard University Middle School ($MS^2$) were $6^{th}$ and $7^{th}$ graders. A total of 37 students participated in the three focus groups – 19 at Walls; 10 at TJHS; and 8 at $MS^2$. At each school, students were divided into groups of three or four (5 groups at Walls; 3 at THHS; and 2 at $MS^2$).

The focus groups were recorded and transcribed. Students were advised that the transcriptions were for internal Smithsonian use only and that their participation constituted informed consent.

Students who volunteered for the focus groups were given a small monetary incentive to participate. In addition, the Smithsonian team provided drinks and snacks.

## Findings: Image Selection and Storylines of "Exhibits"

### *Image selection*

Each group of three or four students was given a packet with 31 pictures containing a variety of images including photographs of Africans (individuals; groups engaged in traditional ceremonial activities/masquerades; modern schoolchildren/youth; astronomy groups), traditional and contemporary African art, African postage stamps with celestial themes, and telescopes or other astronomy-related images. Students were instructed to look through all of the pictures and select "around six" that particularly resonated with them and visualized Africa for them. They were then asked to use those pictures to develop a storyline for an exhibit about Africa for a target audience of children their own age.

Across the ten groups at all three schools, all but two of the 31 images were selected at least once. The most popular image (used by seven of the ten groups) was "Mbuti woman with facial paint" – though several students thought the striking face dotted with black and white spots was of a boy. "Schoolchildren in Accra, Ghana viewing the total solar eclipse,"[1] "Chief with royal crown and regalia, Asante, Ghana," and "Sirius Astronomy Association (Algeria)" also spoke to the students who chose them five, four, and four times, respectively. Five images were selected three times, nine were picked twice, and the remaining 11 were chosen once (see Appendix A).

***Mbuti woman with facial paint, near Benji,Congo (Democratic Republic). 1970***

## *Themes*

The stories/exhibits developed by the 10 groups of students from their chosen sets of images followed three general thematic storylines - **history, diversity, and fable**.

Half of the groups took an **historical/chronological approach**, telling a story of Africa's trajectory from ancient to modern times.

- *Africa Past and Present* (Walls)
- *History of Astronomy in Africa: From Gods to Science* (TJHS)
- *Astronomy in Africa Throughout the Ages* (TJHS)
- *From Generation to Generation* (TJHS)
- *The Culture of Africa from 3,000 Years Ago to Modern Day* (MS[2])

The history-themed exhibits began with images that evoked the past in different ways – Egyptians who worshipped sun gods (funerary stela of Diefankh), the "cosmos themselves… and then we move to ancient Egypt," "a tribe in Africa worshipping the skies" who built a

[1] This photo appears on the cover page of this report.

replica of the constellations (Nabta Playa), and a queen who lived in Kititt 3,000 years ago (mummy case of Egyptian Chantress Amun-Re).[2]

A sub-theme that emerged was that Africa's **past is still alive in its present** – African people remain connected to their traditions. One astronomy-minded group characterized this as earlier generations "passing on the respect for the sky to their children." Another group's story involving two very different brothers – "one is more traditional and one is more modern with typically Western ways" – implied that tensions exist between adhering to indigenous mores and norms and embracing Western-influenced modernity.

TJHS students were interested in "the transition from cultural and more ancient towards more Westernized European study of astronomy" and chose images to demonstrate this, such as African schoolchildren viewing a solar eclipse and looking through telescopes. Other chronological exhibits depicted the present day with images of youths dressed in Western-style clothing using cell phones.

A related sub-theme noted by students was that Africa is "**not just its stereotypes**." They used images of masks and traditional art objects to illustrate "predetermined conceptions of what Africa is like" and compared those to images of telescope arrays and youths texting on cell phones to show how Africa is technologically of the times and globally connected. The Walls exhibit, *Africa: What do you Think?* lured its audience in with images that "they automatically connect with Africa" (still from The Lion King) and "iconic images that most Americans would recognize" (alabaster statue of King Tutankhamen; Picasso painting) before showing images of astronomical equipment and members of an astronomy association that were "aside from what you generally think of Africa." A different group explained their similar sequence of images – "It makes people feel comfortable, they are not going into it with their ideas about Africa and having their minds blown immediately."

A stereotype-related subtheme illustrated by a couple of the groups with the Picasso painting *Les Demoiselles D'Avignon* was that **Africa has influenced the West** – it is not just the case that Africa has been influenced by Europeans and the rest of the Western world.

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[2] It should be noted that the three exhibits developed by the TJHS groups all took a chronological approach and incorporated astronomy more explicitly into their stories. This was due not only to the fact that these were astronomy students and the session took place in an actual planetarium, but because the Smithsonian team began the TJHS discussion with more background information on the *African Cosmos* exhibition with its science-art connection and astronomical components.

Another overarching theme was the tremendous **diversity of Africa**, including region/landscape, peoples, cultural practices, and, echoing another theme discussed above, between traditional African elements and "westernized" modern elements of present life.

- *The Diversity of Africa* (Walls)
- *It's a Small World After All: Zazu's Adventures in Africa* (Walls)

One Walls group created a story where the bird character from *The Lion King*, Zazu, thinks he is flying around the world, observing different peoples and cultures with diverse religions, dancing and clothing, only to find out that he never left Africa. With respect to geography, several groups pointed out the importance of including North Africa, and one group pointed out that much of the Arab world is in Africa.

The third general type of exhibit took the form of a **story or fable** with human characters and some kind of lesson to be imparted.

- *A Tale of Two Kingdoms* (Walls)
- *The People* ($MS^2$)

In one group's fanciful tale, a brother and sister break two valuable statues (alabaster head of King Tutankhamun and Ife terracotta head). As punishment, their father sends them to boarding school where they make Muslim friends and study the Koran. They learn about Egypt and run away to the desert in search of a pyramid whereupon they die. The moral of the story: "don't be bad." Another group's story is of two brothers who intended to marry across tribes. A shaman from another kingdom was used to determine whom the brothers married and to demonstrate their interest in knowing not just about interactions between Africa and the Western world, but about the interactions between and among [the 55] African countries – what are their relationships, their similarities and differences?

## Findings: Focus Group General Discussions

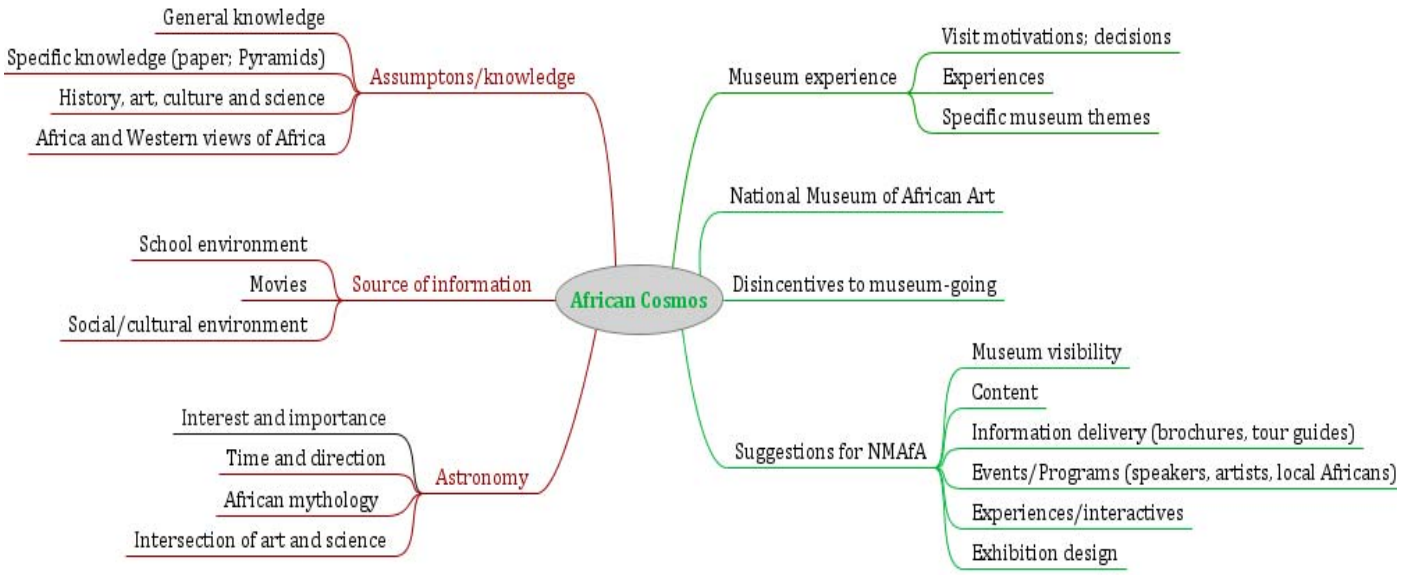
The "exhibit" presentations were followed by an open discussion around the following questions:

- **Africa**: What are the students' assumptions/prior knowledge about Africa and Africans? Where did their ideas about Africa come from?
- **Astronomy**: What do they know about astronomy, constellations etc.? Do they relate the science of astronomy with Africa?
- **Museums**: What is their experience with museums? What motivates their decision to visit?

- **NMAfA**: What is their experience with NMAfA? What specific suggestions do they have for this upcoming exhibition, *African Cosmos*?
- **Suggestions**: What can they teach museum educators that would help their experience?

Through the focus group discussion, participating students were encouraged to express their questions, curiosities and learning needs about Africa, astronomy, museums in general and NMAfA in particular (see Figure 1, Concept map discussion topics).

Figure 1. Concept map of discussion topics




## Prior assumptions/knowledge of Africa

Interviewed students were knowledgeable of basic information about Africa, its geography, culture, resources and their use, and some were able to cite achievements of its people. Some students, especially those who have traveled in Africa, expressed a more advanced experience and understanding of Africa, its people and culture.

The discussion about Africa was prompted by the pictures used in the African Exhibit exercise, so their expression of knowledge of Africa may have been biased towards the topics depicted in

these pictures. One outcome of the activity that is worth noting is that students' participation in this exercise prompted new learning among some students.

> *I really like the art because I want to be an artist when I grow up. So I never knew that Africa had an art… I always thought it was just ancient Egypt…*

### *General knowledge*

Most students had some knowledge of Africa. Participating students were relatively familiar with the number of countries on the continent, its geography, and natural resources and their use.

> *We're in Miss R's class studying Africa; she told us about how they use their natural resources like the Nile river, rivers and stuff, to travel and use it for their food and for many things.*
>
> *[SI Team: What do you think about when you think of Africa? What comes to mind?] Poverty*

### *African history, art, culture and science*

Students were able to share their deeper knowledge of Africa's history, mythology, culture, science and art with the Smithsonian team. As expected, Egypt and the Pyramids were topics familiar to students but many were able to offer information beyond that, like the fact that Picasso created African-inspired art.

> *Well Africa is not just the resources because they have the Pyramids and the great architecture like how big the bridges were. I learned that on the Pyramid, one of the steps is as big as a school bus. And the statues they had, they carved it out and they had to use mathematics to know about how it was shaped because it really looked like the people, that's what they wanted."*
>
> *They knew how to use patterns with a lot of the designs; for example, each Pyramid had to have a certain number of blocks stacked on top of each other. And they also used mathematics to help build a lot of things. They built a pyramid right under a star and you had to use mathematics to be able to calculate where that would be.*
>
> *Most of the artwork would be on scientific stuff or humans … and some of them would be based on their gods too like Maya and Isis, African gods.*
>
> *Back to the math and art, last year in class we learned about different patterns in clothing and one of our classmates figured out how ancient Africans used the Pythagorean Theorem in some of their patterns.*

*… And I know Africa has huge street art and new artistic forms that are represented in Africa and they are all around, the streets, the murals. I don't know any of it, I just know it from hearing.*

*The new techniques of art inspired by African ways, that's interesting. There's a few documentaries out about graffiti specifically in Johannesburg. And there's a lot of really famous artists who are going there to do work. I was watching one about artists painting murals in – it's called something -- in the slums and painting murals for the people and stuff like that. That spoke to me. I connected it to something that I would be interested in. If you think about things that kids our age would be interested in…Not just kids. Adults can be interested about that type of stuff too, the influence of artistic differences.*

### *Specific knowledge*

Some students' knowledge of Africa was quite advanced.

*Paper; she [the teacher] also talked about how the first paper was created in Africa from papyrus along the Nile. How they use the Nile for many resources.*

*Do you know who Imhotep is? He is supposedly the oldest [first] scholar in the world. He practiced medicine, philosophy, architecture, mathematics and science and he had a lot of things built. He taught kings and queens how to be kings and queens.*

*Maybe northern Africa and southern Africa, like going to look at extremes. There was a period of time where northern Africa was very advanced for its age, where the University of Timbuktu and the Abbasid of Caliphate. And southern Africa we could explore the European advances in astronomy in that era with the British and the Dutch Boers.*

### *African and Western Views*

Some students talked about Western views and perceptions of Africa or simply compared Africa with the West.

*I don't think people see how Africa… It's a little bad but I think Westerners feel Africa is kind of a burden, they don't add to the global culture as other countries do. And I think that is a false conception.*

*After studying world history I realize that a lot of people including myself are sort of under the impression that America is and always will be the top leading country in the world. [SI Team: exceptionalism]. Yeah, but when you look back throughout history you see that everyone has gone through their phases. Africa used to be the pinnacle of art and culture and existence. Things like that may be highlighted.*

*I think it would be interesting to see how advanced Africa is today. Because you don't think of Africa when you think of science. I think it would be interesting to see how far they have come in catching up to the western world.*

## Sources of information

Traveling to Africa and the students' school, personal and social environments were all cited as sources of information about Africa.

Some students' knowledge of Africa was enhanced by their visits to the continent. Such a direct experience gave them a deeper understanding. One of the few students who had traveled to Africa said this about his experience:

*[I went to] Lesotho. To do service and I stayed with the Lesothon (sp?) people. It was really different from the U.S. and Lesotho is a small country completely surrounded by South Africa, so I flew into Johannesburg. Just seeing the difference between modern Africa and Johannesburg and I was in really rural areas in Lesotho, people living in mud huts in villages with no electricity and nearest store was eight hours away. It's just the two extremes. There were not a lot of kids our age; they are struggling with technology. Some had cell phones but they didn't know about technology. It was interesting to see the collision of the modern and traditional sides, and how they deal with that.*

### *Schools: teachers, textbooks, students*

School environments were most frequently mentioned by students as their main sources of information about Africa. Students were more likely to learn about Africa and its history, art and sciences from teachers or textbooks. For example one student said:

*My social studies teacher told us how at the beginning of slavery, around when the Europeans came to Africa, they didn't really come for the people but they DID come for human resources and the natural resources.*

### *Movies*

Another source of information about Africa, Africans and their culture were movies and media such as *The Black Panther, Invictus,* and *Dangerous Ground* [movie set in South Africa with Ice Cube]. These media prompted thoughtful questions about life in Africa:

*[SI Team: So your question, in a way, is how are real people dealing with this in their lives?]*

*Yeah. When you get completely away from the city is it that it doesn't happen as if there is no city? And the city people completely avoid them because they're not cultured? Is there a relationship between the two?*

*[SI Team: I like that example because it is on the ground, it's not these really high level issues. Did anybody see the soccer movie with Matt Damon?]*

*Rugby*

*[SI Team: yes, the rugby movie. They made it a huge national kind of issue and they often can seem separated (compared to) something that is more right up front.]*

### *Social/cultural environment*

Exposure to current events either through their social or cultural environment also was a source of information about current African life.

*I know you see a lot in current events, first Libya and now Syria. And then you see all these kinds of conflicts and stuff and then people tend to focus on all the negative things. So that's where most of what you see… that and textbooks. Beyond that it is kind of hard to know much.*

## Astronomy

### *Interest and importance*

Some students were interested in astronomy. One said "I have a telescope at home." Others talked in more detail about their interest in astronomy.

*I saw the planetarium at Air and Space – seeing the visuals of the closer galaxies and stars… it's amazing to see how small the world is. I loved that concept that we are just on a rock.*

*I must admit I only go outside at night… aside from this planetarium I haven't visited many other planetariums*

*I go on trips with my granddad who has a pretty big hobby in astronomy. We go to major telescopes around the area. The most recent was the NRAO – National Radio Astronomy Observatory. It's hard in my area, there's a lot of tree cover right around my house. I keep a telescope at my grandad's house who lives out in more rural Virginia. When I go down there I tend to try to look up at stars with the telescope and see what I can find. It's hard in this area.*

A few students elaborated on the importance and implications of basic knowledge of astronomy:

*Without the sun we probably wouldn't exist. I guess we could say it's part human curiosity, we just want to know everything – what is this bag made out of? Why is everything there?*

*I was going to say something similar along those lines. There's just a pretty fundamental human curiosity as to what lies beyond our own planets, beyond the solar system. It's important to know how vast the universe is; it puts everything in perspective in my opinion.*

*Sure astronomy as far as looking at stars is visual but a lot of astronomy, more advanced astronomy, is much more math and physics related. I was thinking more of that.*

*The sky as inspiration. I look at the sun as our life source. I've got a telescope at home.*

*I think of the stars mostly as life forms, like organisms, in science you can see how the life cycle of a star is almost related to a human [life cycle].*

*I was doing a little research on stars and really the life is that when they're first born they are really hot, they are fiery balls and some planets live and some planets die due to them crashing into each other. But then it's based off their solar system, so as their solar system continues in time, the planet starts to cool down and the remaining rocks are the new planet and a sun begins to form and then the planet starts orbiting around it and that's how a solar system is first born.*

### *Time and direction*

Students also mentioned African people's early use of astronomy to assess time and direction:

*Also in Africa, they were known for how they used the water to tell time. It was the direction of the sun, how it reflects on the water to cast a shadow.*

*To tell time also with the water, not just shadows, they would use the time when the water would rise up and when it would go down, low tide and high tide. And so they would tell what time it is by the height of the water. And they would use the stars to tell direction. Mostly in slavery but I guess for hunting at night they would use the stars, like the North Star to tell where they were going so they couldn't get lost.*

### *Mythology*

In talking about ancient Africa's relationship with the cosmos, students related their knowledge of Greek and Egyptian mythology:

*The Greeks called it hieroglyphics. In Africa… I've seen pictures how they have the bird head and then the human body.*

*In the Pythagorean Theorem we came from Africa – a Greek philosopher came over, his name was the root word of Pythagorean [Pythagoras] and he took it back to his country. And they had Greek gods like Nemesis, Hades… who are all the demigods.*

*Most of the stories that the Greeks had, they took them from African culture stories. Do you know who Obatala is? He is the Nubian god who they say created the world. And that's where they get Zeus from.*

### *Intersection of art and science*

In discussing the idea of an astronomy-related art exhibition, students offered their ideas about the differences and similarities between art and science:

*I think you've got the more physical sciences which are very direct mostly and then I think art is more of an expression of our ideas about what's going on around us.*

*I think it's more that science or astronomy or whatever gives us answers and not to oversimplify but art gives us something pretty to look at. I think the sorts of arts are something that people want to look at.*

## Museum experience

The study team asked students about their general museum experiences such as what influences their decision to go to a museum, who makes that decision, what kinds of museums they go to and what museum experiences they prefer.

### *Visit decision*

Some students found out about Smithsonian museums and/or NMAfA from teachers, field trips or family. Students said that visiting museums apart from school was a family decision. Others indicated impediments to coming to the Smithsonian and other museums such as lack of a car, lack of funds to pay transportation costs, etc.

For example, one student who talked about why he goes to museums said:

*The reason I find out about exhibits is because I like learning about my history – history is my favorite subject in school. I like going on the Internet on Google and l like typing in the Smithsonian or I like going to a lot of books in the library and reading about history.*

### *Experiences*

Generally students indicated they like visiting museums. Some students cited seeing real objects, learning authentic information or learning about their past as their primary sought after experiences:

*I like to look at the artwork or artifacts that people gather. There was one… I think it was the Natural History Museum and they had crystals and gems and I like to look at them.*

*I like to go to museums because it helps me learn more of my education and I can see from what I learn and what I already know which is biased and which is not – which is true and which is fake.*

*They [museums] help me know about my past before I was here.*

*I like to use my museums to know about my ancestors and how we came to be where we are today and learn how they used to help us overcome to get where we are now.*

Other students singled out as preferred museum features, interactive or immersive components of museums.

*I like to go to some of the newer museums because they are more interactive.*

*One time at the end of the year class fieldtrip we went to New York so we went to famous museums. What I noticed about the museums there was that they had tons of interactive stuff. They had a telescope for you to see the stars even though it was a science museum, it was fun. They had slides and everything, they had a globe of earth compared to everything that you could touch and see and it was rotating. At the other museum that we went to it had you in the middle, it would be like Asia's population, Africa, India, China, everything surrounding you. So you could learn basically everything about the past -- Africa, India and everywhere in remote places. In Africa they showed the old animals – I do remember the mammoth, they actually had a full size but it wasn't a real one, they said.*

*One time I was at the American Museum of Natural History and they had this tunnel and it was like you were in the Arctic and it was cold in the tunnel and when you come out there is this big movie screen and it's talking about how polar bears were first brown but they got white with the time.*

### *Specific museum themes*

Some students said they like museums with exhibits focused on Egypt and its history inspired themes.

*They have this museum in Philadelphia that is my favorite. It's the one about Cleopatra. I wanted to go but it cost a lot of money so I couldn't go. But I heard they have a lot of the exhibits about Egypt, the statues and the [cover] they put on the mummy.*

*Because in Africa they have many other museums [where] they have many of the other mummies on display like King Ramses and King Tutankhamen. And the pyramids – the way that people say that they were built – today if you try to shove a paper in between the cracks you can't do it.*

Other Smithsonian museums, for example American History, Air and Space, American Indian, and Freer and Sackler's Peacock Room were mentioned; a few were mentioned by students as their favorite museum experiences. Others referenced non-SI museums as their favorites.

## NMAfA

Only a few of the students who participated had visited the National Museum of African Art. For some students the building itself was memorable. Others, when talking about their experiences with NMAfA, offered suggestions:

> *Interactive things are always good. I know it's hard to do that at the African Art Museum… You can't touch the art, put on masks…*

> *That would be cool, a street art inspired mural maybe, that could be the icon piece.*

## Disincentives to museum-going

Others talking about their experiences with the Smithsonian and museums in general indicated that museums may not be as interesting or important to the teen demographic as one might hope:

> *I think a problem that a lot of museums have is that by the time that we're this age we've already seen a lot of it. We feel like we've seen it already. And it may have been like five years plus, we may not even remember what was there but "Oh, we've been there, that's boring."*

> *I just have a feeling that you guys are… the Smithsonian as a whole is… we think history.*

> *I think D.C. people are really tired of the Smithsonian. People in D.C. are really jaded. People really hate on tourists. People feel like it's not a big draw. I know I haven't been to all the memorials; I've never been up in the Washington Monument. All these D.C. iconic things that people come to D.C. for, people in D.C. don't actually take advantage of. If you could put an emphasis on the more local aspect and do something with people in D.C. that would be good. Because people in D.C. have a really big sense of D.C. pride but it kind of stops at the tourist area of D.C.*

## Students' suggestions

### *Museum visibility*

When asked about their experiences with NMAfA, many students noticed that the Museum is not very visible. Students' suggestions on how to raise visibility varied. Some offered very basic ideas such as ads in Metro stations or at schools, while others suggested social media to build up visibility among younger people.

> *Advertisements and stuff. I was just thinking about that… kind of going off into something completely different… with Ron Paul who is running right now. If you think about he might not be so appealing to a younger demographic but he is becoming that way because his advertisements are so appealing for the younger crowd and he placed them on YouTube*

*and all of that. So, if you find the right mode of propaganda, that could easily draw a lot of the younger crowd because we're always online or at least looking.*

*What I was thinking was it has to be something that gets people to go, like with new movies, it's like, "Oh, I really need to see that." So you get out and you go to the movies, you buy a ticket and you go. So if there's an exhibit that's somewhat equivalent, where it's like, "Oh that really interests me, I want to go see that" you'd be able to draw people out.*

Smartphone applications (apps) were a popular suggestion for the Museum, especially for the older students. In the students' views, a NMAfA app would feature content, orientation, and social engagement features. Options discussed for an app included tour guides, maps and tracking, photos, commenting, and ratings. All responded favorably to the idea of having information delivered by peers.

*I would like them to tell me their opinion on the exhibit and what they like most about it, just their general opinion and feeling about the exhibit.*

*Or that they explain the artwork for people so that they could always replay it. Let's say they go a certain artwork. They could either take a picture of it or even type in the name of the artwork and then it will come up like a surf result and they could get information about it.*

*I would love to have people telling me how it was so I could go there and find out for myself if it was really good or not, so I would see for myself how I feel about that exhibit.*

When prompted, Facebook, Twitter, and QR codes were also favorably seen by students. With respect to the power of social media, the "Kony 2012" movement was given as an example by several students. Others provided content-related suggestions for raising NMAfA's visibility such as having icons to identify with the Museum:

*Local artists in D.C.*

*You know Ultra? [Asad "ULTRA" Walker] This guy named Asad… he used to be a really famous D.C. graffiti artist but he's really in touch with his African roots. He does a lot of paintings related to that. I'm sure you could pay him and he would do whatever.*

*That would be cool, a street art inspired mural maybe, that could be the icon piece.*

### *Content*

Participants spoke about their needs for information about Africa.

*Anything about Africa in a museum is just exciting because in our textbooks there is so little information about Africa. In general youth are very ignorant about Africa. Any outside source we can look at is great.*

*A presentation of diverse collections, different cultures and emphases in Africa, the past and the present and future all combining together.*

*Like living situations – the past and now. Have that little sound thing that comes down on you so you can hear what went on in a house then and what you could hear now, like in the Natural History museum. (In African voices)*

When OP&A inquired about the upcoming *African Cosmos* exhibition, students offered these suggestions:

*For this astronomy thing, doing something at night where you can actually see the stars and have some kind of presentation to go along with it would be really good.*

*In terms of an astronomy exhibit, I think it would be really cool to learn about the mythology behind their explanations for different constellations and things that happened in the sky, [it] just would be different than the western world and the European mythology.*

*Maybe northern Africa and southern Africa, like going to look at extremes. There was a period of time where northern Africa was very advanced for its age, where [there was] the University of Timbuktu and the Abbasid of Caliphate. And southern Africa, we could explore the European advances in astronomy in that era with the British and the Dutch Boers.*

### *Information delivery*

Brochures:

*[SI team: how do you feel about these museums that have children's guides, brochures that you take around? Is that a good thing?] For children (…) As long as there's a description that tells what the picture is and what it is about and why the artist knew that picture…*

Tour guides: Some of these students would favor tours, especially if run by someone their age. And they preferred small tour groups.

*I think a lot of people like to do their own thing and [like]not being restricted to that big group of what we associate with tourists. Usually the big tourist group with the matching hats.*

*It would be cool if it was one guide to three people or something.*

*I heard a radio show about this exhibit at the Guggenheim… the idea was you went through the exhibit with a guide but they were small groups. We could repurpose that idea. They talked to you about what you saw and what your ideas of Africa are as you go through the exhibit.*

Interactives: Interactive features such as touching artifacts or drumming, trying on things such as masks, and any other exhibit interactive components related to stimulating the senses would be more in tune with student's ways of accessing information.

*A lot of times you have all these cool kiosks and one gets broken and the whole purpose is lost because one doesn't work*

*Maybe something interactive because I like touching things, playing with things, seeing how…*

*There's a button, I can push it…*

*The Natural History Museum definitely has that kind of interactive feel, which is I guess better for smaller kids, but maybe a more advanced version of that for teens.*

*Especially not so much at the art museums*

### *Events/Programs*

Creative events and programs such as local art/artists inspired programs were high on students' lists of how to augment the NMAfA content. Other type of events were mostly suggested by SI staff:

*[SI team: there's a rich community of African immigrants to the U.S. living right in this area. Would it be feasible to get young people who have just moved here in contact with you to be ambassadors for the day and go visit a museum with them…]*

*If you did that with the school and got the school to take us there, that would be excellent.*

*We do host foreign students; schools across the world come here.*

*[SI team: A lot of these folks already live here… the global issues network… is there a way to connect and understand their culture from them?]*

*That sounds like a cool idea.*

Take the art on the street

*It would be cool if you guys took some art, not major pieces, but took art out into the city – at an exhibit or fair or something that's going on. World musicians that could draw on the community. Taking the museum out of the museum.*

Music/performance

> *To me I think it's more the music, the tribal rituals that have the drums and the singing … I think it's a lot different than what we have over here. It's just interesting, how the differences in different cultures come out in that way*.

Students' lists of suggestions also contained "don't dos":

> *What if we had an Africa Underground for [high school] seniors? An evening event with dance and drumming. Would you go?*
>
> *I never really go… I go to the dance festivals but not really as a social type thing. If you want to do a social thing if you're still young with an institution you would more just do it for going to listen to music.*

### *Exhibit design*

Students had very specific ideas about what they want and expect in the layout and design of an exhibition.

Maps:

> *It would be really cool if you had a map, because a lot of people just don't know where countries are. If you are walking around Africa you can compare the different cultures of different areas like Sahara and Sub-Sahara, West and East. You are walking with the timeline of past and present but also location.*
>
> *If you are just going in a timeline you don't know 'this artwork is from where it is'. Where is this country? What part of Africa? It would be easier for people to distinguish it and recognize the comparison with other countries. [SI team: And why would that be important?] Because people just don't know where the countries are. And I'm pretty sure there are countries in Africa people haven't heard of.*

Timeline

> *Oh yeah, a timeline in an exhibit is always good. I like seeing timelines. Photographs and a little paragraph and then going to the exhibit and seeing what happened more in detail. I saw something like that and really liked it at Natural History about humans in prehistoric time.*

## General observations

The discussions with students at School Without Walls, Thomas Jefferson High School, and Howard University Middle School showed not only that students have basic knowledge of Africa and astronomy, but that they are quite eager to learn more.

- Participants had a good general knowledge of Africa, Africans, and their history, culture,

mythology, and art. Students who had the opportunity to travel in Africa and those exposed to the continent through current events, movies and other media outlets had a deeper understanding of life in Africa.

- Despite the fact that students seem to view museums as traditional and not necessarily important institutions to them, they seemed eager to visit NMAfA. However students indicated that higher visibility, more appealing offerings, and information delivery means better suited to their age group would be more likely to attract them to the Museum. For most young people visiting NMAfA, and any other museum for that matter, visitation is a family or school decision. However; most students can persuade their parents to make a trip if they know it is worthwhile. In their views, NMAfA has to do a better job of increasing its visibility, especially through Metro ads and information delivered in the schools.
- Students had many suggestions for what the Museum can offer both in terms of its content and how to offer it. A Museum app that would provide social connection opportunities was among their top choices. Engaging programs and immersive displays also were very popular with students.
- Students had basic knowledge of astronomy and most seemed eager to learn more. One special interest is African mythology although most said they would like any information.

## Appendix A: Focus Groups Image Key

✓ = School Without Walls

✓ = Thomas Jefferson High School

✓ = Howard University Middle School

(1) The SKA (Square Kilometre Array) is a planned multi purpose radio telescope with a collecting area approaching 1 million square metres. It will consist of individual elements placed in a 5-kilometre core and in smaller `islands' that extend up to several thousands of kilometres from the core. The elements will vary from small dipolar antenna's to 15-metre dishes, thus enabling the SKA to observe radio-waves with frequencies from 100 MHz to 10 GHz. The site for the SKA will be selected in 2011. The shortlist consists of South-Africa and West-Australia, two sites which are amongst the most radio-quiet zones in the world. ✓✓✓

(2) Samuel Ladoke Akintola, Premier of Western Region, Lagos Nigeria. ✓

(3) Conde Tiemoko wearing large gold bicone bead, Bamako, Mali, 1970.

"Among the finest gold ornaments of the Sahel are the Peul earrings worn in the Mopti, Jenne and Macina regions of Mali. gold bicone beads are often profusely adorned with granulation, a technique in which tiny granules of gold are attached to produce a rich, shimmering effect." [Garrard T., 1989: Gold of Africa, Prestel]. This photograph was taken when Eliot Elisofon was on assignment for Life magazine and traveled to Africa from August 18, 1959 to December 20, 1959.

(4) Yoruba woman with elaborate hairstyle, Nigeria. 1970. ✓✓

(5) Mbuti woman with facial paint, near Beni, Congo (Democratic Republic). 1970. ✓✓✓✓ ✓✓✓

(6) A Bamana hunter-griot (bard) performing a dance, Narena village, Mali, 1995. ✓✓

(7) Initiation rituals among Ndaka people, near Epulu, Ituri Forest, Congo (Democratic Republic), 1972. ✓

(8) Schoolchildren in Accra, Ghana viewing the total solar eclipse, 2006. ✓✓✓✓✓

(9) Les Demoiselles D'Avignon, Pablo Picasso, 1907. ✓✓

(10) Chief's Crown, Akan, Ghana, velvet and gold leaf. ✓✓✓

(11) Funerary stela of Diefankh. ✓✓✓

(12) Bedu mask, Nafana, Cote D'Ivoire, mid 20th century, wood, paint, metal. ✓

(13) Baule moon mask. ✓

(14) King Tutankhamun, Egypt, alabaster. ✓✓✓

(15) Ife terracotta head, Yoruba, Nigeria, 11th century. ✓✓✓

(16) Chief with royal crown and regalia, Asante, Ghana, mid 20th century. ✓✓✓✓

(17) Dyoboli dancer wearing metal-covered masks, Cercle of San, Mali. ✓✓

(18) Kanaga masqueraders during the Dama ceremony, Sanga, Mali. ✓✓

(19) Ngady Amwaash masked dancer, Mushenge, Congo (Democratic Republic) ✓

(20) Kenya, Maassai dancers

(21) Still from The Lion King, Disney, 1994. ✓✓

(22) Sirius Astronomy Association (Algeria) members during a Saharan observation trip at the invitation of Al-Kutb Astronomy Association from Berriane. ✓✓✓✓

(23) Boy looking through telescope. ✓

(24) Nabta Playa, Southern Egypt. Nabta Playa is a large, complex archaeoastronomical site in the eastern Sahara. The megalithic stone circle at Nabta was situated on the Tropic of Cancer, serving as one of the first known examples of an astronomic observatory in the world. ✓✓

(25) Over half a billion mobile subscribers in Africa as of 2010. ✓✓

(26) The International Space Station Fleeted Across the South African Night Skies on The 30th of August 2009 at 6:51pm. Mitchell Krog. ✓

(27) Children in Timbuktu, Mali, reading. ✓

(28) Kenyan students viewing a solar eclipse at an eclipse observation site. One student is using a special telescope to observe the Sun. ✓

(29) Namibian stamp featuring Sagittarius, 1996. ✓

(30) Zimbabwean stamp series, solar eclipse, 2001. ✓

(31) False lid of Chantress Amun-Re, Egypt. ✓✓✓