

TEEN PROGRAMS: ENGAGING ADOLESCENTS IN THE MUSEUM SETTING

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CHAPTER TEN

Discussion

The Adventure Science Center, the Museum of Contemporary Art, Los Angeles, the Exploratorium, and the de Young Museum are all institutions that provide educational based, long-term programming for teens. Through these programs, teenagers are being given an opportunity to work in a museum. In that time, they are taught the content of the museum and how to facilitate interactions between themselves, the content of the museum, and the visitor. Many of these programs have been a part of the museum's programming for decades, and demonstrate the value of having a program centered on engaging teens within the museum.

This chapter will discuss five key themes that can be identified in examining the four case studies and in reviewing the literature on teen development, museum education, and teen programs in museums. The chapter will also discuss some of the challenges that arose in the way the interview questions were posed, and will close by summarizing important points about the case study museums.

Overall, both the literature review and the case studies highlight the importance of understanding the value of social components of teen programs. While art and science education was considered important by case study museums, museums placed much value on the growth of the teens during their

time in their programs. In addition, while knowledge of the museum's content and the teen's comfort within the case study museums were all outcomes of the programs, it was not the focus of the programs.

The five key themes are as follows: personal development and growth is an important component of teen programs; successful teen programs focus on professionalism and the development of 21st century skills; use of hands-on and experiential training in the programs is common; much value exists in providing long-term programs in museums; and finally, teen programs provide an important social outlet for youth.

Each program provided personal development and growth

In the case study museums, growth in communication skills, especially when working with adults, as well as teens' growing self-awareness, independent decision making, confidence, and teamwork skills can be seen as an important reason why these teen programs were effective.

As McNeely and Blanchard emphasize, this personal development comes at a crucial time for youth. Adolescents at this age are at an in-between phase, moving from child to adult. Key development changes are underway, such as those involving personal identity, self-esteem, the development of ideas and the selection of role models (2009, 14-15). These developmental changes within

teens were seen in the case studies and are reflective of successful teen programs.

The *Room to Rise* impact report, discussed in chapter four on teen programs in museums, contacted alumni from four teen programs to look at the way the program influenced the alumni after they left the program. The results were impressive, with 95% stating that the program was either a very good experience or one of the most important experiences they have had and 75% identifying their time in the program as the most positive influence in their youth (Linzer and Munley 2016, 24; figure 10.1). Alumni also cited the lasting impact the program had on personal identity with 62% identifying the program greatly influenced their self-awareness and 58% saying the program contributed to their values and priorities (Linzer and Munley 2016, 27). The case study museums demonstrate what Lerner (2007, 35) has emphasized, that effective programming teaches youth confidence and character, which they will take with them as they become adults.

Figure 2: How Alumni Describe Their Program Experiences
Alumni have highly positive recollections of their teen program involvement. More than half of survey respondents say it was one of the most important experiences they have had.



Fig. 10.1 "How Alumni Describe Their Program Experiences," pg. 24. Linzer, Danielle, and Mary Ellen Munley. 2016. *Room To Rise: The Lasting Impact of Intensive Teen Programs in Art Museums*.

Teen Programs teach 21st Century skills and professionalism

Successful teen programs also emphasize professionalism and development of 21st century skills. All of the case study museums, for example, emphasized that their teen program was fashioned like a job. Teens were paid for their services and in return they were expected to be on time, professional, and prepared. For many of the programs, this was also a first job for the teens. Programs such as the de Young Ambassadors program cited the development of professional skills to be one of the main two goals of the program (Turney 2016).

Development of a professional skill set is an important aspect of successful teen programs, because work habits are beginning to become more defined in teenage years (McNeely and Blanchard 2009, 15). While the literature recognizes the importance of teen years as formative to good work habits, fewer teens are working than ever before (Itō 2010, 297). As Itō argues, even if teens are not in the primary labor market, their contributions to the economy still need to be valued (2010, 297). While teens legally could work paid jobs, they are frequently not being given the opportunity to work in areas that might appeal to them as adults. The development of professional skills through these programs at museums gives teens experience in a work setting that teens could see themselves working in. By having access to scientists, educators, and curators, teens are given the opportunity to explore various careers that might be of interest. In the Room to Rise impact report on teen programs in art museums,

Linzer and Munley found , for example, that 79% of alumni held professional positions in the arts and 57% said that the program they were involved in as teens had a strong influence on their career decision (2016, 33).

In 2009, the Institute of Museum and Library Services (IMLS) developed a report on the need for museums and libraries to integrate 21st century skills for its audiences (IMLS 2009, 6). Some of the 21st century life skills that a museum should include in these teen programs are focus on audience engagement and experience; acts in highly collaborative partnerships; embedded in community; and purposeful learning objectives (IMLS 2009, 7). Teens in the programs are able to benefit from a museum focused on 21st century skills in two different ways: first, through learning skills from the museum's content; and second, through professional development. Significantly, employers are looking for skills learned by experience, in addition to the ability to be a lifelong learner and to adapt to continuous change (Ferrari 2003, 213). Effective teen programs can provide the experience an employer will look for in the future.

Through these museum programs, teens are given professional references, encouragement towards graduation, and opportunities to continue on in the museum in a more focused area. Some of the case studies even cited wanting to do more professional development in the future, such as participating in college visits with the students in the program.

The use of experiential based training was most effective for learning

Many teen programs also involve the teens working directly with objects or exhibits. Objects are used as referential tools to “embrace differences of opinion,” and the values placed on these objects can be up for interpretation (Grinder and McCoy 1985, 100).

Museums with successful teen programs often have staff to interpret and provide visual instruction for visitors. Programs can do this in different ways. Adventure Science Center, for example, has teens work at the various exhibitions. MOCA uses teens to run their Sunday Studio event. The Exploratorium Explainers work at stations geared toward visitor-engagement. And the de Young uses the teens to engage school children in and out of the museum. Using inquiry-discussion with the teens in their training engages their most effective learning style within the museum (Grinder and McCoy 1985, 98).

Teens’ interests are most engaged by having a structured program that is balanced by an interactive or problem-solving element where they are able to use their abilities to think abstractly and make connections (Sternberg 1989, 167). These programs all involve using a variety of skills, from interpretation to implementation.

In her book, *The Participatory Museum*, Nina Simon frequently cites ways to engage teens in the museum. Every instance involves interactive engagement (Simon 2010, 233). Like Simon, Dewey found the value in hands-on interactives

as ways to solidify the experience for the visitor (Grinder and McCoy 1985, 38). Using hands-on interactives not only imprints the experience for the visitor of the museum, whether it be a child or adult, but it also solidifies it for the teen engaging with the visitor.

Long-Term Programs Are More Successful For Teen Engagement

Much value exists in developing and implementing long-term programs. In the case study museums, the length of the four programs varied from four months to four years. While some engaged with the teens for a much longer period of time, all had programs that developed over time. In other words, these were not programs that had the teens coming to the museum just once or twice, but on a week-to-week basis for months at a time.

The length of the program is an important area to consider in developing successful teen programs. As with playing sports, the teens need time to learn to work together as a team. While the specific amount of time can vary, studies have shown that "if activities are to be effective, they must take place on a regular basis, over an extended time period and become increasingly more complex" (Caldwell and Baldwin 2003, 191).

All four case study museums recognize the importance of long-term involvement; the shortest program was four months and the longest was four years. Commitment over time to the teens contributed greatly to the success of

these programs. The Adventure Science Center, for example, gives the teens more responsibility each year they stay in the program, so that by the time they are seniors, they are helping to train the new freshmen (Van Patten 2016). The de Young Ambassadors program spends the first fourteen weeks of the program training the teens before they are sent out to work with the elementary schools (Turney 2016). MOCA's apprenticeship program does not start planning their large Teen Night event until February, when the teens have been in the program for five months (Flores-Emnace 2016). All of these programs make sure the teens are comfortable in the museum and with the content, before going deeper into the program. Indeed, training is necessary for any effective program (Dryfoos and Barkin 2006, 227); however, by designing programs that give training teens the time they deserve, what was trained for has a more lasting impression.

Another benefit that comes with a long-term program is its ability to allow the teens to develop a relationship with the staff. The programs that engage youth and encourage development most are always the ones that center upon a youth and adult partnership, or are youth-led (Fletcher 2014, 85). Vygotsky's Sociocultural Theory is based on the idea that learning benefits from social settings and is "fostered by support" (Shaffer 2010, 35). This support is provided by the museum staff that engage with the teens and treats them as fellow staff; it is a necessary relationship between learner and mediator.

That does not mean that there are not high expectations for the teens. In each program, the teens are consulted frequently, and when necessary, the teens provide feedback. Feedback is key because it helps the teens grow. According to Lerner, "It changes us, which allows us to change the way we act and interact, all of which allows us to develop into more complicated people" (2007, 25). The feedback shows that the environments of programs allow teens to evolve and grow, thanks to the supportiveness of the program.

Each program was a much needed social group for teens

Teen programs in museums provide an important social outlet for teens. For example, the social aspect of the teen program was consistently cited as something of value to the teens in all of the case studies. In fact, one of the programs was exploring ways to interact with the teens socially (Turney 2016). Having voluntary interest groups that are non-academic is an important aspect of teenagers' social needs (Jensen 2001, 113). Research has shown that teens are more likely to attend the museum if they are with their peers (Jensen 2001, 113). Museums create a social environment for teens to interact. An effective program incorporates the need for a social setting, while also teaching the teens the ability to think and perceive things through their peers and human experiences (Jensen 2001, 113). Using the tools within the museum helps to create programs that have more of an impact on the social experience of teens.

The expansion of social networks and forming of new friendships are core features of development for adolescents (McNeely and Blanchard 2009, 14). The teens currently in the programs grew up with Internet and social media. As social media grows and becomes even more accessible, teens still foster relationships most dominantly in the real world (Boyd 2010, 82). The most impactful relationships are the ones they establish with peers in school, sports, or other activities (Boyd 2010, 82). It is through these "personal communities" that teens develop and can help their fellow youth negotiate identity and intimacy (Boyd 2010, 83). By having the teens lead groups, they are able to develop ownership over the activities, and when they experience the outcomes, they know that it was created by them (Fletcher 2014, 89).

In particular, MOCA discussed how its program gave their teens an opportunity to meet people they would never get to meet normally. Programs that bring in diversity in various ways allows the teens to expand their social spheres by putting them with others who have different backgrounds and perspectives from their own.

Interview Questions

Many of the questions asked in the case study interviews related to the development of the programs. It was assumed that programs were developed to meet professional standards or museum best practices, yet those were never

addressed by those interviewed. All of the programs were developed because teens approached the museum with interest. This is significant because it means that all of the teen programs examined here were a result of the teen audience wanting to be served by the museum. If given the opportunity again, this writer would have perhaps explicitly addressed the AAM Best Practices or Committee on Education (EdCom) Standards more specifically. However, even without addressing the EdCom standards explicitly, each program approached various areas of the standards, such as accessibility, accountability, and advocacy.

In addition, addressing the implementation of the programs in case study museums in more detail would have been helpful. Gaining more information about the various staff involved with the teens and the specifics of the program on a day-to-day basis would have supplied additional insight. Since all of the case studies ended up being long-term educational programs, it would have also been valuable to ask more about how the program fit within the rest of the museum's educational programming.

Another surprising result of the interviews was the lack of formal evaluation. Out of the four case study museums, only the de Young conducted formal evaluation consistently. This will be addressed in greater detail in the conclusion chapter.

Conclusion

The five themes outlined above demonstrate that positive results come from effective teen engagement in museums. By considering the four case study museums,

three important points emerge. First, each case study museum *empowered* the teens in many ways; by having the teens in the museum long enough to grow in their job and become comfortable in the setting, teens were able to feel empowered to talk to visitors and gain confidence as educators. Second, by giving paid jobs to the teens, *professionalism* was emphasized and 21st century skills were emphasized, benefiting them as they head into college and careers. Lastly, the teens became *advocates* for the museum. Through building relationships with their peers and the museum staff, the teens were given an opportunity to have agency over a program, creating space where teens could realize that the museum was also a place for their age group.

Many of the case studies also did not promote the programs as a way of recruiting; instead, the teens in the program did this for them. Indeed, through empowerment, professionalism and advocacy, as well as the five major themes outlined earlier in the chapter, the case study museums created unique opportunities for teens to learn and grow in the museum.

The next and final chapter will present some conclusions and outline recommendations for ways museums can improve teen engagement in the future.

CHAPTER ELEVEN

Conclusion

In 2015, First Lady Michelle Obama dedicated a new building for the Whitney Museum of American Art, and spoke of the need to breaking barriers in the arts for diverse young people (Linzer and Munley 2016, 5). She stressed the transformative power museums can have when “They open their doors as wide as possible, both to the artists they embrace and to the young people they seek to uplift” (Linzer and Munley 2016, 5). As the next generation of youths mature into adulthood, it is imperative that museums engage them in their institutions. For many museums, their members, donors, and board are made up of Baby Boomers and Generation X. In the next several decades, those numbers will be dwindling and the population will be made up of Generation Y, Millennials, and the generation that follows, whose name has yet to be determined.

In the last thirteen years, art museum attendance specifically has gone down from 26.5% to 21% (Iyengar 2012, 17). If this trend continues, even fewer people will be attending museums. When looking at the trend of attendance from 2002 to 2012, the only age group whose percentage of visitors that did not decline was those 75+; for this population the percentage actually went up (figure 11.1).

Science, history, and other non-art museums do not seem to suffer from lower attendance in the same age demographics. In fact, non-art museums are

generally more attended than art museums. The *TEA/AECOM 2014 Theme Index and Museum Index: The Global Attractions Attendance Report* reported that of the 22 most visited museums in the United States in 2014, 15 of them were non-art museums (Rubin 2015, 67). These museums included the Museum of Natural History, the California Academy of Sciences, and the Children's Museum of Indianapolis. This does not mean these museums can neglect teen engagement issues, but rather, that all museums can learn from institutions that have developed and implemented vibrant, successful, and effective teen programs.

	Art museum or gallery 2002	Art museum or gallery 2012	Craft fairs and arts festivals 2002*	Craft fairs and visual arts festivals 2012	Places visited for design or historic value 2002	Places visited for design or historic value 2012
Gender	26.5%	21.0%	33.4%	27.4%	31.6%	23.9%
Male	24.6%	18.7%	27.0%	18.2%	30.5%	23.1%
Female	28.2%	23.1%	39.2%	26.4%	32.5%	24.6%
Race/Ethnicity						
Hispanic	16.1%	14.3%	20.3%	16.8%	17.2%	13.8%
White	29.5%	24.1%	38.0%	26.2%	36.0%	28.3%
African American	14.8%	11.9%	19.7%	12.0%	17.9%	13.1%
Other	32.7%	21.2%	25.8%	16.3%	30.4%	21.2%
Age						
18-24	23.7%	18.3%	29.2%	18.3%	28.3%	20.5%
25-34	26.7%	22.0%	33.5%	21.6%	33.3%	25.1%
35-44	27.4%	21.2%	37.2%	27.0%	35.8%	23.3%
45-54	32.9%	22.0%	38.8%	24.6%	38.0%	26.2%
55-64	27.8%	22.5%	35.1%	25.8%	24.2%	26.5%
65-74	23.4%	22.4%	31.1%	26.1%	24.2%	25.5%
75+	13.4%	15.5%	15.7%	15.0%	12.8%	15.0%
Highest level of education						
Grade school	4.5%	3.6%	8.4%	5.9%	6.3%	3.9%
Some high school	7.7%	4.3%	14.0%	8.0%	11.4%	5.9%
High school graduate	14.2%	9.9%	25.7%	16.3%	20.2%	13.3%
Some college	29.0%	19.7%	38.2%	23.6%	36.5%	25.0%
College graduate	46.6%	37.2%	51.9%	32.9%	51.2%	38.4%
Graduate school	58.8%	49.3%	51.9%	36.9%	56.8%	48.8%
Family income						
Less than \$20K		10.2%		12.3%		12.1%
\$20K to \$50K		14.0%		17.9%		16.2%
\$50K to \$75K		22.1%		24.5%		25.1%
\$75K to \$100K		26.5%		28.9%		30.1%
\$100K to \$150K		33.8%		30.5%		38.8%
\$150K and over		43.2%		36.4%		46.6%

Gray shaded box indicates that the estimate is significantly different from the 2012 estimate at the .05 level.

Figure 11.1 Visual arts rates of attendance (based on adults participating at least once in past 12 months), by demographic group: 2002 and 2012, pg. 21. From *A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts, 2002-2012* (2012, 21)

This chapter will present three main conclusions concerning teen programs in museums that emerged from the findings in the case studies in relation to the literature review. The chapter will also outline four recommendations for museums planning to develop or enhance their teen programs.

Conclusions

Conclusion One: Programming for teens must hold the same level of importance to a museum as the programs for children and adults.

Teenagers are at an interesting point in their lives. They no longer want to be seen as children, but are not yet ready to take on the responsibilities of an adult. This transitional age can make it hard for museums to know how to best utilize them or how to engage them. Because of this, museums often choose to not engage with teens specifically; instead, they will offer programming “for all ages” as if that is enough. A survey of 220 museums found that only a third of the museums examined had programs for teens (Pogrebin 2015). Implementing a teen program can help raise the attendance of teens to the museum; as the case of the Walker Art Center demonstrated after a more teen-centered program was introduced and teen attendance shot up by 11% (Striepe 2013).

It is important that museum teen programs involve teens in the planning process. No one knows what teenagers want in a museum better than the teens themselves. They frequently feel patronized by museum staff and ignored as if

their opinions are not valued; this causes them to feel like the museum is “not for them” (Jensen 2001, 112). For a museum to develop effective programs, teens must feel that they have a voice in the program. All of the programs in the case studies have regular informal check-ins with the teens to see what is working and what is not. The museum can then make adjustments to the program accordingly. Informal check-ins also allow the teens to see that their opinions are valued, which is demonstrated when the museum implements changes that teens suggest.

The staff of museums must also serve as role models for the teens. Adults that lead teen programs have the opportunity to build an impactful relationship with the teens. A crucial ingredient in teen engagement comes from “a stance of mutual respect and reciprocity, where youth expertise, autonomy and initiative are valued” (Itō 2010, 350). This occurs when the adults in the program work with the teens as partners, not in a hierarchy (Fletcher 2014, 84). One outcome of committed educators in the program is that the museum staff are challenged and transformed in similar ways through the experience (Linzer and Munley 2016, 5).

Conclusion Two: Effective teen programming must include both youth engagement and education. It should not be either one or the other.

To have an effective teen program, the program must be designed to engage and educate. When thinking of museum programs, one usually considers

the museum being used as an institution for learning, and while that is true, to invest in teens, the program must also engage them personally. These programs can be seen as "leisure education," where the education comes through a development of interests and skills that are personal and meaningful to the teens (Caldwell and Baldwin 2003, 187).

For teen programs to be most effective, they need to engage teens' interests. According to Koke and Dierking in the findings from their IMLS grant funding youth report, the most positive youth engagement programs have four main characteristics:

Youth-centered: They respond to diverse talents, skills, and interests; build on strengths; choose appropriate materials; provide personal attention; reach out to the community to recruit a range of participants; and make youth leadership an integral part of the program.

Knowledge-centered: They have a clear focus, provide high-quality content and instruction, embed multiple "hidden curricula" in their activities, and ensure that participating youth have teachers (both adults and peers) from the program and community.

Assessment-centered: They have cycles of planning, practice, and performance, giving participants a sense of structure and accomplishment. They offer feedback and recognition, and take stock of a broad range of competencies.

Community-centered: They create caring communities and family-like environments in order to build trusting relationships, establish clear rules, give participants responsibilities for the program, and provide constant access to adults and community, including links to leaders, jobs, and other institutions (2007, 12-13).

The programs discussed in the case studies all value engaging teens. They are more than volunteers doing busy work. The teens in these programs are educators in the museum, using their knowledge and energy to promote the content of the museum. The programs also all discussed how they let the teens' interests direct their experience. For example, the Exploratorium uses the

resources within the museum to foster a deeper program for the teens. If a teen shows interest in biology, s/he is given tools to learn more about it. The more the teen is able to be excited about what is being taught, the more confident s/he will be in delivering and internalizing the information.

For the teens to have a healthy transition into adulthood, there are five similar characteristics or outlooks (Lerner 2007, 15). The five C's are: competence, confidence, connection, character and caring (Lerner 2007, 15). When these characteristics are present, collaboration appears. All of these characteristics were evident in the work with the teens in the case study museums. Lerner goes on to say that in order to grow the five C's, youth must be given the opportunity to do the following three things (2007, 29):

1. Have sustained, positive interactions with adults
2. Participate in structured activities that enable them to develop valued life skills
3. Become leaders of valued community activities

All four teen programs examined in this thesis strive to give the teens the three opportunities listed above. For example, the de Young Ambassadors program has fourteen weeks of training, followed by fourteen weeks of implementation; this gives the teens a structured program where they work consistently with museum staff. By then taking what they learned and applying it in local elementary schools, they are allowed the opportunity to work within the

community. Having the programs focused in this way allow the programs to be educational and engaging at the highest level.

Conclusion Three: Effective teen programs allow teens to work as paid staff in the museums.

Each program discussed considered the teen program to be a job, and treated it as such. Teens were expected to be on time, to be professional, and to represent the museum. They also were paid to do it. By making the program a job instead of an activity to attend, the expectations the teens had for the program were raised. Teens understood that they were making a commitment to being at the museum consistently over a long period of time. By creating a first job scenario in the museum, teens could see the museum as a place for them now, and in the future. While none of the museums had specific data on the topic, many of them shared instances of discovering that their alumni had gone into fields related to the experience. Some are working in the nonprofit world, and some in the arts or sciences, while others continued to pursue careers in museums.

As 21st century skills take on a more important role in the museum's structure, it will become necessary for institutions to integrate visual literacy skills and acquiring learning and innovation skills, which are centered around critical thinking, creativity, innovation, communication, collaboration, and visual,

scientific, and numerical literacy (IMLS 2009, 23-24). Through well-designed and implemented teen programs, youth are able to acquire 21st century skills in a job setting.

Recommendations

Recommendation One: Museums must work to establish relationships with the schools in their community.

One of the reasons teen programs in the case study museums were so effective in bringing teens into the program was because the museum had developed long-term relationships with local schools in the area. These relationships allowed teachers to recommend teens they felt would be a good fit for the program. It is therefore vital for museums to engage with surrounding school communities because they can have the most impact on those who are also their neighbors.

In the art-related teen programs in this thesis, one of the major outcomes of the program was providing an art education for the teens. Many teens today are not receiving any art education in schools; indeed, the only time they were having arts-related information presented to them was in the museum. Art education is necessary for youth as they grow up, helping them to develop critical-thinking skills and providing them with a powerful outlet for development. Studies have shown that experience in art directly affects youth educational

success. As *A Decade of Arts Engagement: Findings from the Survey of Public Participation in the Arts, 2002-2012* found:

Childhood experience in the arts is significantly associated with educational level obtained in adulthood. Over 70 percent of college graduates said they visited an art museum or gallery as a child, compared with 42 percent of adults who have only a high school diploma (Iyengar 2012, 56).

Impactful educational experiences are necessary for a developing youth. As the *Public Participation Survey* demonstrates, engagement in the arts at a young age benefits them throughout their lifetimes.

Museums need to be able to provide an education that schools cannot. When Los Angeles was recently acknowledged as the creative capital of the world, it was also noted that it might not be able to sustain that based on the lack of support of arts education in K-12 curriculum (Nusca 2009). Moreover, in 2014, it was cited that out of 50 states, only 27 considered art a core academic subject (Art Education Partnership 2014, 3). Furthermore, in the United States, only 26 states require an art component in high school graduation, including hands on classes such as ceramics or drama, which while valuable, do not necessarily provide the comprehensive art education that teens need (Art Education Partnership 2014, 3;6).

This recommendation focuses mainly on the relationship between *art museums* and schools, due to the lack of art education in schools. That is not to say that a strong relationship between science museums and schools is not also

necessary to provide additional educational support. The need for a supplemented art education is more common, however, as science education has a much stronger presence in general high school education.

Recommendation Two: High school programming is not enough; museums must also engage youth in middle school.

In analyzing the four case study museums, it was surprising to learn that they all only worked with high school aged teens, usually ages 15-18. It had been expected that they would work with teens of all ages, which is from 13-19. Upon further consideration, while it makes sense to have high school aged teens in these programs, as they are offered paid jobs and the legal age to work is 16, the issue of engaging middle schoolers in the museum remains. In the book *Life Stages of the Museum Visitor* (2009), authors Susie Wilkening and James Chung dedicate a whole chapter to middle school students. The chapter examines common trends between teenagers and museums, and considers ways to engage with them.

Middle schoolers are generally ages 11-14, and make up a population of 12 million people in the United States (Wilkening and Chung 2009, 70). It is at the middle school age when youth begin to feel that museums are not for them. Common viewpoints middle school age students have of museums are that they are boring and have too much reading (Wilkening and Chung 2009, 70). That

being said, zoos, aquariums, and science museums were cited as their favorite types of museums (Wilkening and Chung 2009, 72). Interestingly, all of these types of museums are centered around interacting with the visitor. This means that to engage youth, a more interactive experience must be provided.

Engaging experiences can come through effective programs that utilize the content of the museum to appeal to middle schooler interests. In the same way that the teen programs in the case studies engaged the high school students on varying levels, museums should be providing similar opportunities for middle school age. If museums cannot provide job opportunities, museums could offer volunteer positions or a junior program, where the high school students work with the younger teens.

Another alternative is implementing the MOCA teen night model. By giving the teens an event centered around them, the museum can show younger ages the type of programming in which they can participate in a few years. Additionally, events geared toward teens give them a place to go that is safe. Indeed, if museums want to get youth invested, then they must begin as early as possible.

Recommendation Three: It is necessary for teen programs to perform formal evaluations to assess the effectiveness of the program.

Of the case study programs analyzed, only one had a formal evaluation process. While some museums cannot afford to hire a staff member whose sole

responsibility is to evaluate the effectiveness of the program, it is still necessary for teen programs to evaluate their efforts. Teen programs should be evaluated for content, experience, and impact. Evaluation can include exit interviews with teens to discuss the program. Evaluation can also go both ways: the program can evaluate the teen experience and the teens can evaluate the program.

Through evaluation, common themes around the program can be discovered. Through one such type of evaluation, museums found that the relationships built within the program were of great value to the teens, while the educational aspect felt like “one-size fits all” (Baum, et al. 2000, 14). Having this knowledge allows museums to adjust programs accordingly.

Additionally, museums should consider ways they can remain in contact with the teens after they leave the program. Through an IMLS grant, Mary Ellen Munley is doing just that and finding that the impact the teen programs have had on the teens is immense (Linzer 2014, 237). In the report *Room to Rise*, which was discussed in Chapter Four, Munley and Linzer looked at four museums that have had teen programs since the 1990s and contacted the alumni of the program to examine the impact of the program on alumni (Linzer and Munley 2016, 18-19). They were able to survey 67% of the alumni, and found that of the alumni surveyed, 95% stated that their time in the teen program was considered to be a very good experience or one of the most important experiences they have

had. There is no way to know the impact the program is having without evaluation.

Finally, evaluation of these programs should be completed with reference to AAM Best Practices and EdCOM's Educational Practices. By utilizing the standards, museums can ensure that programs are appropriately aligned with the expectations of accredited museums.

Recommendation Four: Teen programs should be integrated within the museum budget and should seek additional funding for support.

Many of the original 30+ teen programs examined in this thesis were sponsored by outside funding, that is, funding of the program came from sources other than the museum's budget. While any support for educational funding is valuable to the program, teen programs should be considered valuable enough for the museum to support them with or without the extra funding. The Exploratorium, which began in 1969 and is the longest running program examined here, has made the program a permanent part of its budget, and also works with the most teens in any program. The value the Exploratorium as an institution puts on the program impacts the teens in the program. They see that they are an important part of the organization. Teen programs should not be based on funding on a year-to-year basis. Nothing will let a teen know they do not matter more than a museum not supporting their programs.

If additional funding is needed, museums should examine long term funding options, such as corporate sponsorships or endowments to keep programs sustainable for a longer period of time. If museums do not invest in the teens now, they might not have an audience in the future. Finally, while many museums now have funding from foundations, museum education staff should also work with their governing authorities to create links to foundations that can result in funding.

Recommendation Five: Museums should look to take the programs a step further, finding ways to connect with as many teens as possible.

While long-term teen programs are effective ways to engage teens, they only are able to impact a limited number of local teens. The number of teens engaged in each of the four programs examined here numbered between 20 to 100. While these smaller numbers are important, museums need to do more to engage a larger and broader audience. This does not mean that they necessarily need to bring in more teens to their currently established programs. In fact, the small size of programs such as the ones at MOCA and the de Young contribute to the success of the program. In Koke and Dierking's report, *Museums and Libraries Engaging America's Youth: Final Report of a Study of IMLS Youth Programs, 1998-2003*, the authors concluded that "programs for small numbers may have the greatest impact. Positive youth development

literature shows that the greatest gains are often made in programs that serve small numbers of youth intensely” (2007, 9). Instead, museums should engage with teens in a variety of ways through activities such as MOCA’s teen night, which brings in almost 1,000 teens to the museum (Flores-Emnace 2016) or through more teen-centered programs, such as teen-curated exhibitions or teen artist-in-residence programs.

In New York City, teens in museum teen programs have created a group called the Teen Summit (MTS), “dedicated to improving and promoting the role of youth in the arts” (MTS 2016a), with a mission focused on outreach, research and community (MTS 2016b; figure 11.2). The Teen Summit also has an annual meeting, similar to a professional conference, where they meet and discuss issues and the current state of teen programs (AASLH Blogs 2013).



MUSEUM TEEN SUMMIT IS A COLLECTIVE OF YOUTH LEADERS
REPRESENTING DIFFERENT MUSEUMS IN NEW YORK CITY DEDICATED TO
IMPROVING AND PROMOTING THE ROLE OF YOUTH IN MUSEUMS.

Fig. 11.2 Museum Teen Summit Home Page <http://www.museumteensummit.org/home.html>

Similarly, in San Francisco, there is Teen Force, which includes representatives from the California Academy of Sciences, the Exploratorium, the Contemporary Jewish Museum, the Walt Disney Family Museum, the Asian Art Museum, and the Yerba Buena Center for the Arts. The Teen Force is used to help museums in San Francisco engage in a larger and more effective way. These teen program 'supergroups' are a step in the right direction toward reaching a larger audience.

Museums should find ways to connect with as many teens as possible through a variety of diverse platforms. Two other examples of expanding a museum's reach to teens are the programs STAMP and Free Arts NYC. STAMP stands for Students at Museums in Philly and is a program created by the Great Philadelphia Cultural Alliance (GPCA) (Zeidman 2015, 35) that gives Philadelphia teens a free, year-long membership to the city's top museums and attractions (Zeidman 2015, 35). By removing the barrier of cost as a reason for not visiting museums, GPCA hopes to provide teens with every opportunity to interact with art and culture (Zeidman 2015, 35).

Likewise, Free Arts NYC is a non-profit organization dedicated to providing underserved families and children with opportunities to engage in the city's cultural institutions (FANYC 2016a). Some of the opportunities the organization develops are free museum days with museums in the city, studio visits, and

internships (FANYC 2016b). Programs such as Free Arts NYC go beyond just engaging in cultural institutions, but also provide much needed arts education and give youth access to after school programs that they have been shut out of (figure 11.3). Both of these programs work to remove some of the barriers that keep youth from visiting museums. By providing easier access to these institutions, these organizations hope to bring more teens into the museum.

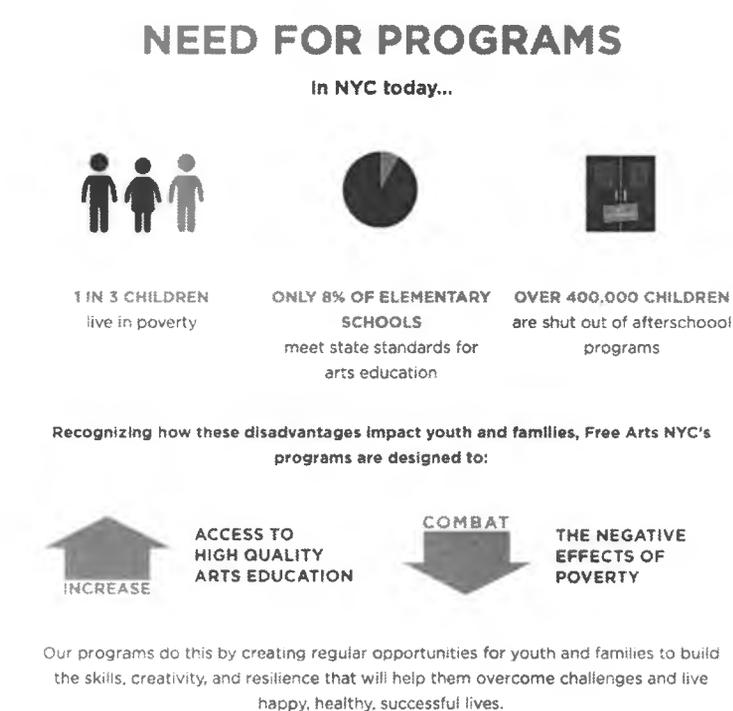


Fig. 11.3 Free Arts NYC Impact Page <http://www.freeartsnyc.org/about/our-impact/>

Final Thoughts

Museums must begin engaging visitors at a younger age if they hope to maintain attendance, stay relevant, and fulfill their social responsibility. Just as John Cotton Dana was pushing the museum away from being exclusive and centered on a European model, museums today must move away from the perception that they are only visited by older, retired people and elementary school children on a field trip. Today, more museums are engaging teens than in decades past. But there is still more work to do.

As teen programs become more common, questions remain about how they can best be utilized (Wyrick 2014, 234). However, museums must consider teens as a community to serve in the same way as any other group, and well-designed teen programs can lead the way. An effective teen program is one that engages a diverse group of teens over a long period of time, and that gives them room to grow and find their place in the museum world. It was John Dewey who wrote, "A meaningful experience is one that builds on what came before and leads to future growth" (Dewey, in Bedford 2010, 114). Museums can connect with youth and create meaningful experiences, leading to continued and vibrant relationships as teens grow into adulthood. As museums move to engage more people, they must do what First Lady Michelle Obama has suggested: open up those doors widely, especially to teens.

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Appendix 1: Linzer and Munley 2016, Cover Page

ROOM

THE LASTING
IMPACT OF
INTENSIVE TEEN
PROGRAMS IN
ART MUSEUMS



TO RISE

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Having gone through the program, I've felt like the museum is home to me. Even if I've never been to a particular museum before, I just know how to be in that space.

In her dedication of the Whitney Museum of American Art's new building on April 30, 2015, First Lady Michelle Obama shared these powerful words from a past participant of the Whitney's Youth Insights program for teens, a testament to the deep and lasting attachment to museums that was forged through that formative experience. Mrs. Obama's historic speech highlighted the perceived barriers that keep so many young people of color and from low-income neighborhoods away from our nation's cultural institutions: "There are so many kids in this country who look at places like museums and concert halls and other cultural centers and they think to themselves, well, that's not a place for me, for someone who looks like me, for someone who comes from my neighborhood." At the same time, she spoke to the power of targeted education programming to break down those barriers, actively engaging and welcoming young people from all walks of life into the museum. By doing so, these programs are fostering lifelong connections to art and culture and broadening and building diverse museum audiences for the future.

The remarks Mrs. Obama shared were gathered as part of a national research initiative launched at the Whitney nearly five years ago seeking to better understand and document the long term and continuing impacts of youth engagement and empowerment in museums.

Among our research questions we asked: How are young people changed by having access to the art, artists, and ideas of the museum? And how are museums shaped by opening themselves up to teens and giving them a voice in the institution? Through a generous National Leadership Grant from the Institute of Museum and Library Services we were able to assemble a team of peer institutions, scholars, and expert advisors to tackle these questions with innovation, creativity, and rigor.

Room to Rise is the result of years of close partnership among four museums that have pioneered intensive teen programming in the context of the contemporary art environment over the last two decades. We were lucky to have truly exemplary partners in this project—the Walker Art Center, The Contemporary Arts Museum Houston, and The Museum of Contemporary Art, Los Angeles. Their willingness to devote time, energy, intellectual resources, and their incredible staff to exploring these questions made this research exponentially more significant. As a result, this investigation has yielded findings that go beyond the anecdotal, generating a new understanding of the deep and lasting impact museums can have on their program participants and their larger communities.

We thank IMLS for strengthening our nation's museums and libraries and encouraging us to ask and answer difficult questions that have the potential to push our practice forward as a field. With their support, we provided extensive professional development opportunities for staff at each of the participating museums, building our collective capacity to conduct substantive research and evaluation. My gratitude to Claudia French, Deputy Director for Museum Services, Steven Schwartzman, Senior Museum Program Officer, Heien Wechsler, Supervisory Grants Management Specialist, and Tim Carrigan, Senior Library Program Officer, all of whom provided thoughtful guidance and assistance over the life of this project.

At the Whitney, I thank Kathryn Polts, Associate Director, Helena Rubinstein Chair of Education, for her leadership and commitment to excellence and rigor in the work of the Whitney's Education Department. My deepest appreciation to Danielle Linzer, Director of Access and Community Programs, who served as Project Director, without her tireless efforts and vision, this ambitious project would not have been possible.

This initiative was strengthened immensely by a team of talented collaborators and contributors. Research Advisor Mary Ellen Munley, Principal of MEM & Associates, expertly guided us through this process, helping to turn a group of committed educators into enthusiastic researchers. Just as teens can be changed in profound ways by the time they spend in museum programs, our staff found themselves similarly challenged and transformed by this uniquely powerful learning experience. Editor Ellen Hirzy brought her experience with museums to editing and developing additional content for this report. Our graphic designers, Virginia Chow and Hilary Greenbaum, transformed the hundreds of quotes, graphs, and stories we collected into an accessible resource for the field.

Finally, we are grateful to the alumni themselves who entered this evaluative process with such openness and honesty and shared so much about their lives. Now, as a result of this research, we see that teens from all backgrounds not only represent a dynamic and engaged audience for contemporary art and museums, but also that these experiences benefit them, and in turn, our society, in myriad, complex, lasting ways. It is our hope that these findings will illuminate the deep and transformational impacts museums can have on young lives when, in Mrs. Obama's words, "they open their doors as wide as possible, both to the artists they embrace and to the young people they seek to uplift."

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Room to Rise: The Lasting Impact of Intensive
Teen Programs in Art Museums

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We launched this investigation by building on previous research in museums and in the broader field of creative youth development.⁵ Observations and anecdotal evidence from staff and participants in the four museums had already documented the transformational effects of their programs on participants' lives—nurturing creative, critical, and visual thinking skills, building confidence and self-esteem, and empowering teens to express their own ideas and listen to multiple perspectives.

But there was much more to learn. Taking a broader view, the research team designed the study to generate quantitative and qualitative information that would incorporate participants' reflections. We experimented with various authentic ways for alumni to tell us about their program experiences and their lives today. Through active dialogue and exchange across the institutions, we looked for insights that would inspire and guide professional practice while sparking further research on youth development and teen engagement in museum settings.

Six questions shaped our research. Do alumni of these teen programs stay connected to arts and cultural organizations? Do they continue to value and participate in the arts in general? Are they inspired and prepared to pursue academic and professional careers in the arts or museums? Are they motivated to use their experiences in their own community engagement work? Do the programs contribute to staff and audience diversity in cultural institutions? And do the short-term benefits permeate each museum's culture and generate a demonstrable long-term impact on the institution?

Conceptual Foundation

The research team's discovery that the four programs were more alike than different led us to decide that we would examine a type of program—an intensive experience geared to teens in a contemporary art museum—rather than a single museum site. This aspect of the research was driven by a desire for a more sophisticated understanding of teen engagement. Instead of focusing narrowly on program activities and elements, we wanted to identify common essential strategies, short-term outcomes, and long-term impacts of a successful program. We devised multiple methods, including an alumni survey, focus groups, case studies, and interviews, to gather richly contextual and nuanced quantitative and qualitative data. Data collection and analysis respected the uniqueness of each program while seeking to identify common essential design features, outcomes, and long-term impacts of a successful program.

To bridge the gap between theory and practice, we took a rigorous practitioner-researcher approach. Museum staff members were essential, active participants during all research phases, while the experienced researcher,

Mary Ellen Munley, served in an advisory and training capacity. Although in some studies, close affiliation with a program is a disqualifying criterion for serving on a research team to avoid contaminating perspective, this study took the position that team members' unique knowledge of and interaction with programs and participants were valuable assets, especially in formulating study questions and data collection instruments and during data analysis. The researcher gave tutorials on study design, survey development, qualitative data analysis, and other topics, while team members had responsibility for all aspects of the research. As a result, the outcomes are of particular interest to practitioners, and the teens' experiences are represented with care and authenticity.

Along with surveys and interviews, the study used arts-based information-gathering methods, which align with two important features of the program experience: artistic and personal expression. Journey Maps and Photo Journals created by alumni served as raw data, conveying information in highly visual, nonlinear ways that yielded deeper understanding of the long-term impact of their experiences. In addition, the Photo Journals gave the team insight into aspects of alumni's lives (for example, their workplaces, artwork, or homes) that typically are not available through more conventional methods. (Journey Maps appear on pages 38–51. Photo Journals are illustrated throughout this report.)

Reconnecting with Participants

The four programs considered in this study were launched between 1992 and 1999 and have generally served 12 to 15 students a year. The study is based on the programs from their beginning through spring 2011. When data collection began, in 2011, participants and alumni ranged in age from 18 to 36, more than 600 students had participated over the combined lives of the programs.

A first step for the research team was to track down alumni and reconnect with them. Even in the age of Facebook, this process proved challenging, as residences, jobs, and contact information change frequently for this demographic group. Through a combination of tactics over six months—from mailings and cold calls to social media monitoring and in-person networking—we confirmed current contact information for 70 to 80 percent of former participants across all four programs. Having thus re-established contact with generations of alumni—many of whom had lost touch with the museum or their program, particularly at sites where staff turnover was highest—we discovered that their reaction was enthusiastic and they were eager to share their reflections and personal stories.

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Designing the Study

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Teens at The Museum of Contemporary Art, Los Angeles, develop a voice of their own by interacting with both peers and adults.

What We Asked

Our diverse arts-based data collection methods enabled an especially complex look at how these innovative programs have yielded deep and lasting impacts for their participants. In spring 2012, we administered an online survey to all alumni for whom current contact information was available, with impressive returns—a response rate of 67 percent and, among those, a completion rate of 84 percent. We sought information about demographics, academic and career paths, level of arts participation, and alumni perceptions of the program's influence on the development of traits like leadership, social capital, personal identity, and cultural literacy. Focus groups of alumni of different ages and backgrounds from all four museums explored their specific memories of their time in the program and their thoughts about how those experiences affected them.

Case studies delved deeper into the life experiences of 24 alumni. Twelve respondents created Photo Journals that captured their perceptions of the teen program's continuing influence. Each subject documented everyday experiences for a week, chose 10 representative images, and wrote short interpretive captions reflecting on the program's impact on their lives today. A separate

group of 12 alumni who had been out of high school 10 years or more created Journey Maps—visual representations of their paths in relation to art, museums, and careers since graduating from the teen program. The maps served as a starting point for interviews probing certain questions, such as how the teen program experience may have changed a participant's existing relationship to art and museums over time.

Valuable observations about the long-term impact of intensive teen programs on the four institutions themselves came from in-depth interviews with directors and current and former staff. These conversations contributed to an understanding of the programs' development, strengths, challenges, and influence across the museums. They also touched on the implications of this teen engagement model for the museum field as a whole.

An auxiliary publication on study methodology (see whitney.org/roomtorise) provides detailed information on research samples, data collection and analysis procedures, sample instruments, and more.

A list of individuals who contributed to this project as reviewers, advisors, or critical friends appears in the Acknowledgments (p. 84).

Linzer and Munley 2016, 27

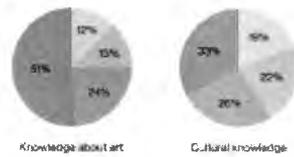
Changing Lives

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Figure 4: The Staying Power of Individual Outcomes
 Years after completing the program, alumni continue to report that the experience contributed to artistic and cultural literacy, arts participation, career choices, leadership skills, personal identity, and social capital. Survey respondents indicated how strong an influence the program had on different areas of their development.

Great
 Strong
 Some
 Little

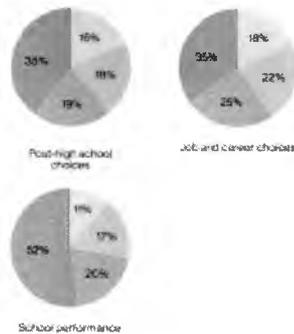
4.1 Artistic and Cultural Literacy



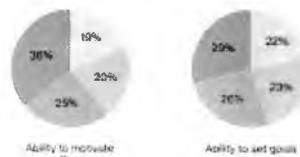
4.2 Arts Participation



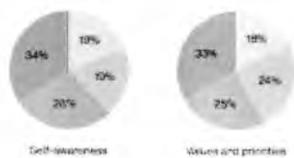
4.3 Career Choices



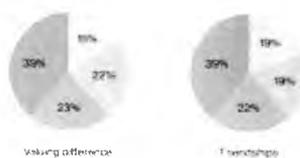
4.4 Leadership



4.5 Personal Identity



4.6 Social Capital



Linzer and Munley 2016, pg. 24

Room to Rise: The Lasting Impact of Intensive Teen Programs in Art Museums

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As Emmanuel Mauleón was combining thoughts and images in his Photo Journal for this study, he said, he recognized “how many of my daily interactions are informed by the skills and analytical techniques I began developing at the Walker Art Center.” Observations about profound, sustained personal influence surface repeatedly in alumni’s reflections on the value of their experiences. They recall that time clearly, and many consider it one of the most important and rewarding events of their lives. Ninety-five percent of survey respondents—who had completed their program from one to 19 years earlier—considered the teen program to be either a very good experience (40 percent) or one of the most important experiences they have had (55 percent). When asked to rank major influences in their youth on a five-point scale from very positive to very negative, on average 75 percent of respondents across all four institutions rated their program as the highest positive influence—even more than family (fig. 3). Two-thirds of alumni echoed Mauleón’s realization that they were often in situations where the experience affected their thoughts or actions.

Our findings revealed five significant areas of long-term influence: a growth in confidence and the emergence of personal identity and self-knowledge; deep, lifelong relationships to museums and culture; a self-assured, intellectually curious pursuit of expanded career horizons and life skills; a lasting worldview grounded in art; and a commitment to community engagement and influence.

Comfortable Without a Mask On: Personal Identity and Self-Knowledge

A decade has passed, but William DeNatale remembers his time in the Whitney Museum’s Youth Insights program “like it was yesterday.” Now in his late 20s and a practicing artist and educator, he says the program instilled confidence, showed him the value of self-reflection, and led him to make a habit of constructive questioning—and even showed him how to use humor to break tension. For his Photo Journal, he chose images that represent the direct connections between his life today and his time at the museum. “The experience

Figure 2: How Alumni Describe Their Program Experiences
Alumni have highly positive recollections of their teen program involvement. More than half of survey respondents say it was one of the most important experiences they have had.

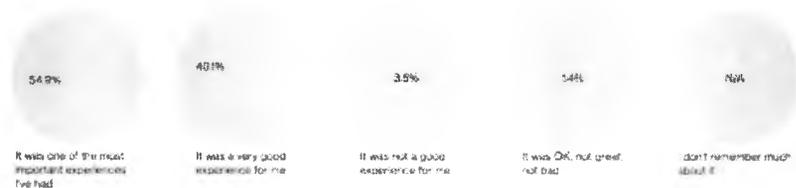
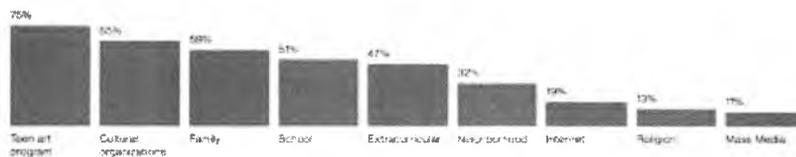


Figure 3: Experiences Alumni Identify as Positive Influences
Alumni rated the teen program experience as the most positive influence on their young lives. The number is similar for recent alumni and for those who experienced the program 15 to 20 years ago.



Linzer and Munley 2016, pg. 33

Changing Lives

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While program alumni remained highly engaged with museums and expressed the value of their role in society, some developed complex critical perspectives on museums, particularly regarding their role in their communities, issues of inclusion, exclusion, and voice, and the relationship between art and commerce. Some preferred to visit small galleries or artist studios, for example, or were working within the museum context to develop programming that more closely reflected their values. Maureen of the Walker observed that "you start to see how [the museum] works and then you start to wonder why it works that way. Some of the questions in our discussions were extremely critical and kind of fostered a sharper look at how things in the art world worked." Tellingly, because of the freedom to question the status quo that they developed in their teen programs, alumni who do go on to work in museums and other cultural institutions may be uniquely positioned to push forward innovative practices.

A Changed Field of Vision: Expanded Career Horizons and Life Skills

Ciaran Finlayson's Photo Journal is filled with images tracing the varied influences of CAMH's Teen Council on his current life direction. "I would likely not be doing any of the things I do every day had I not been selected for TC," he says. Conversations with a museum curator inspired him to study art history and pursue a museum career. Hands-on experience at CAMH and a personal introduction from the Teen Council director led to two internships. And exposure to art in the museum has been "instrumental in the development of my political consciousness and in my thinking about blackness." Finlayson is now a graduate student in aesthetics and art theory at Kingston University in London.

Working alongside professionals in a museum setting reveals potential career directions and opportunities, helps teens crystallize their professional goals, and promotes long-term academic and career development. Alumni reported that their program empowered them to explore career possibilities in the arts that they may not otherwise have known about. When asked to reflect on what they took away from their experiences, alumni across all four museums responded most frequently that the program motivated them to pursue a career in the arts. Seventy-nine percent have held a professional position in the arts, 51 percent felt the program had a great or strong influence on their post-high school academic and career choices, and 57 percent said it had a great or strong influence on their job and career choice (figs. 7 and 8). "Teen Council inspired me to create more diverse and fertile art education programs for teens everywhere," said Chanelle Frazier. "I have always felt connected to the CAMH community, and I have had access to so many things I would never have come across as a result of the program."

Figure 7: Alumni Currently Working in the Arts

More than half of alumni are now artists or work in arts-related occupations.

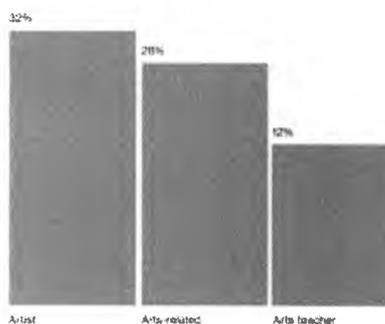


Figure 8: From Teen Program to Career

Teen programs influenced participants' career choices and academic paths. Alumni have pursued professional, arts-related careers, and many say their programs are relevant to their everyday work.

79%
Have held a professional position in the arts.

51%
Said the program had a great or strong influence on their post-high-school choices.

57%
Said it had a great or strong influence on their job and career choice.

58%
Said it is extremely relevant or very relevant to their work today.

Many alumni directly attributed their career choices to their involvement in the teen program, and they structured their academic pathways around those goals. "In my high school, I was the only student considering going for a BFA," said a CAMH participant. "The Teen Council was my only contact with other young artists who helped me compare and contrast college choices that my high school counselor knew only a little about. After choosing to attend Tisch School of the Arts at New York University, my experience at the Teen Council influenced my decision to continue to work within art institutions."

Appendix 2: ChildStats 2016

POP1 CHILD POPULATION: NUMBER OF CHILDREN (IN MILLIONS) AGES 0-17 IN THE UNITED STATES BY AGE, 1950-2014 AND PROJECTED 2015-2050

POP1 Excel Table

Number (in millions)	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	
All children	47.3	48.8	50.5	52.1	53.9	55.7	57.5	59.5	61.3	63.1	64.5	65.8	67.1	68.4	69.7	69.9	69.9	69.9	69.9	69.8	
Age																					
Ages 0-5	19.1	20.0	21.0	21.1	21.5	22.0	22.6	23.2	23.7	24.1	24.3	24.5	24.6	24.5	24.3	23.9	23.4	22.6	21.9	21.3	
Ages 6-11	15.3	15.8	16.2	17.5	18.4	18.9	19.6	20.4	21.4	21.4	21.8	22.3	22.8	23.4	23.8	24.2	24.4	24.7	24.8	24.7	
Ages 12-17	12.9	13.1	13.3	13.6	14.0	14.8	15.4	15.9	16.3	17.6	18.4	19.0	19.7	20.6	21.6	21.6	22.1	22.6	23.2	23.7	
Number (in millions)	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
All children	69.8	69.8	69.4	68.8	68.0	67.2	66.3	65.5	64.8	64.1	63.7	63.2	62.8	62.6	62.5	62.8	62.9	63.1	63.2	63.5	
Age																					
Ages 0-5	20.9	20.8	20.6	20.2	19.9	19.7	19.3	18.9	18.9	19.2	19.6	20.0	20.5	20.8	21.1	21.4	21.5	21.7	21.8	22.1	
Ages 6-11	24.6	24.3	23.9	23.2	22.6	22.1	21.7	21.5	21.3	21.0	20.8	20.4	19.9	19.5	19.4	19.6	20.0	20.4	20.9	21.3	
Ages 12-17	24.3	24.7	25.0	25.3	25.5	25.4	25.3	25.0	24.6	23.9	23.3	22.8	22.4	22.2	22.0	21.6	21.3	21.0	20.5	20.1	
Number (in millions)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	
All children	64.2	65.3	66.5	67.6	68.6	69.5	70.2	70.9	71.4	71.9	72.4	72.7	72.9	73.1	73.3	73.5	73.8	74.0	74.1	74.1	
Age																					
Ages 0-5	22.5	22.9	23.3	23.5	23.7	23.7	23.5	23.3	23.2	23.1	23.1	23.2	23.3	23.4	23.6	23.8	24.0	24.1	24.3	24.3	
Ages 6-11	21.6	22.0	22.2	22.5	22.7	23.0	23.6	24.0	24.5	24.8	25.0	24.9	24.6	24.3	24.0	23.8	23.8	23.9	24.1	24.3	
Ages 12-17	20.1	20.4	21.0	21.6	22.2	22.7	23.1	23.5	23.8	24.0	24.3	24.6	25.1	25.4	25.7	25.9	26.0	26.0	25.8	25.5	
Number (in millions)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
All children	74.1	73.9	73.7	73.6	73.6	73.6	73.7	73.8	73.8	73.9	74.1	74.3	74.5	74.7	74.9	75.0	75.2	75.5	75.7	76.0	
Age																					
Ages 0-5	24.3	24.2	24.1	24.0	23.9	24.0	24.1	24.2	24.3	24.5	24.6	24.8	24.9	25.0	25.1	25.2	25.3	25.3	25.4	25.4	
Ages 6-11	24.6	24.6	24.5	24.6	24.7	24.7	24.6	24.6	24.5	24.4	24.3	24.4	24.5	24.6	24.8	24.9	25.1	25.2	25.4	25.5	
Ages 12-17	25.3	25.1	25.1	25.0	25.0	25.0	25.0	25.0	25.0	25.2	25.1	25.1	25.1	25.0	24.9	24.8	24.9	25.0	25.1	25.1	
Number (in millions)	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	
All children	76.3	76.6	76.8	77.0	77.3	77.4	77.6	77.8	77.9	78.1	78.2	78.3	78.5	78.6	78.8	78.9	79.1	79.3	79.5	79.7	
Age																					
Ages 0-5	25.4	25.5	25.5	25.5	25.5	25.6	25.6	25.7	25.7	25.8	25.8	25.9	26.0	26.1	26.1	26.2	26.2	26.3	26.4	26.5	
Ages 6-11	25.6	25.7	25.8	25.8	25.9	25.9	26.0	26.0	26.0	26.0	26.1	26.1	26.1	26.1	26.2	26.2	26.3	26.4	26.4	26.5	
Ages 12-17	25.2	25.4	25.6	25.7	25.9	26.0	26.1	26.2	26.3	26.3	26.4	26.4	26.4	26.5	26.5	26.5	26.6	26.6	26.6	26.7	
Number (in millions)	2050																				
All Children	79.9																				
Age																					
Ages 0-5	26.6																				
Ages 6-11	26.6																				
Ages 12-17	26.7																				

SOURCE: U.S. Census Bureau, Current Population Reports, Estimates of the population of the United States by single years of age, color, and sex, 1950 to 1959 (Series P-25, No. 311); Estimates of the population of the United States, by age, sex, and race, April 1, 1960, to July 1, 1973 (Series P-25, No. 519); Preliminary estimates of the population of the United States by age, sex, and race, 1970 to 1989 (Series P-25, No. 947); and (Interim) estimates for 1980, 1986, 1990, 1995, and 2000-2010. The data for 2011 to 2014 are based on the population estimates released for July 1, 2014. Note: 1989 is the last year for which data are available.

Appendix 3: United States Census Bureau (USCB) 2016a

U.S. and World Population Clock



Mar 11, 2016 11:43 UTC (+8)



COMPONENTS OF POPULATION CHANGE

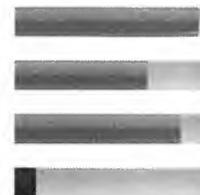
One birth every **8 seconds**

One death every **11 seconds**

One international migrant (net) every **29 seconds**

Net gain of one person every **15 seconds**

11:43:47 UTC



United States Census Bureau (UCSB) 2016

United States Census Bureau

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Table

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PEOPLE

Population

Population estimates, July 1, 2015, (V2015)	10,170,292
Population estimates, July 1, 2014, (V2014)	10,116,705
Population estimates base, April 1, 2010, (V2015)	9,818,700
Population estimates base, April 1, 2010, (V2014)	9,818,664
Population, percent change - April 1, 2010 (estimates base) to July 1, 2015, (V2015)	3.6%
Population, percent change - April 1, 2010 (estimates base) to July 1, 2014, (V2014)	3.0%
Population, Census, April 1, 2010	9,818,605
Age and Sex	
Persons under 5 years, percent, July 1, 2014, (V2014)	6.4%
Persons under 5 years, percent, April 1, 2010 (V2014)	6.6%
Persons under 18 years, percent, July 1, 2014, (V2014)	22.8%
Persons under 18 years, percent, April 1, 2010 (V2014)	24.5%
Persons 65 years and over, percent, July 1, 2014, (V2014)	12.2%
Persons 65 years and over, percent, April 1, 2010	10.9%
Female persons, percent, July 1, 2014, (V2014)	50.7%
Female persons, percent, April 1, 2010	50.7%
Race and Hispanic Origin	
White alone, percent, July 1, 2014, (V2014) (a)	71.3%
White alone, percent, April 1, 2010 (a)	60.3%
Black or African American alone, percent, July 1, 2014, (V2014) (a)	9.2%
Black or African American alone, percent, April 1, 2010 (a)	8.7%
American Indian and Alaska Native alone, percent, July 1, 2014, (V2014) (a)	1.5%
American Indian and Alaska Native alone, percent, April 1, 2010 (a)	0.7%
Asian alone, percent, July 1, 2014, (V2014) (a)	14.8%
Asian alone, percent, April 1, 2010 (a)	13.7%
Native Hawaiian and Other Pacific Islander	0.4%

Appendix 4: Iyengar 2013, Cover Page



HOW A NATION ENGAGES WITH ART
HIGHLIGHTS FROM THE 2012 SURVEY OF PUBLIC PARTICIPATION IN THE ARTS



Iyengar 2013, Contents

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25	Novels and Short Stories, Poetry, and Plays
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28	Traditional Media and the Internet
29	Handheld and Mobile Devices
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About the Survey

The NEA survey was administered in July 2012 as a supplement to the U.S. Census Bureau's Current Population Survey (CPS), and therefore is nationally representative. The 2012 SPPA included two core components: a questionnaire used in previous years to ask about arts attendance; and a new, experimental module on arts attendance. In addition, the survey included five modules designed to capture other types of arts participation as well as participation in other leisure activities. (To view the 2012 SPPA questionnaire, go to: arts.gov/publications/2012-sppa-questionnaire) Respondents were randomly assigned to either of the survey's core questionnaires, and then were randomly assigned to two of the remaining five SPPA modules. Most SPPA questions address arts participation that occurred in the 12-month period prior to the survey's completion. The total sample size of the 2012 SPPA was 35,735 U.S. adults, ages 18 and over, of which 31.5 percent were represented by proxy respondents. The 2012 SPPA had a household response rate of 74.8 percent. To permit analysis of arts attendance and voluntary reading trends across survey years (e.g., comparisons with the 2008 SPPA), Sections I and II of this report rely on the Core 1 questionnaire rather than on Core 2, although, where noted, findings from Core 2 are occasionally presented.

Iyengar 2013, pg.20

Visual Arts and Other Attendance

3) As in prior years, more Americans went to visual arts events and activities than attended most types of arts performance. Between 2008 and 2012, however, rates declined for the following activities:

- Visiting an art museum or gallery (21 percent of adults nationwide, or 49.3 million, did this activity at least once in the 2012 survey year)
- Attending a crafts fair or visual arts festival (22.4 percent, or 52.6 million adults)
- Women, non-white and Hispanic groups, and graduate or professional degree-holders visited art museums and galleries at approximately the same rates as in 2008. Museum-going rates declined for the youngest adults and for 35- to 44-year-olds, but grew for the oldest adults (75 and over).

Percent of U.S. Adults Who Attended an Art Museum or Gallery and/or Attended a Crafts Fair or Visual Arts Festival: 2002, 2008, and 2012

	2002	2008	2012	2008-2012	
				CHANGE	RATE OF CHANGE
Visited an art museum or gallery	26.5%	22.7%	21.0%	-1.7pp**	-8%**
Attended a crafts fair or visual arts festival	33.4%	24.5%	22.4%	-2.1pp**	-9%**

pp = percentage points

**change is statistically significant at the 95 percent confidence level

Percent of U.S. Adults Who Visited an Art Museum or Gallery, by Selected Demographic Variables: 2008 and 2012

VISITED AN ART MUSEUM OR GALLERY		
	2008	2012
ALL ADULTS	22.7%	21.0%**
Gender		
Male	21.4%	18.7%**
Female	24.0%	23.1%
Race and Ethnicity		
Hispanic	14.5%	14.3%
White	26.0%	24.1%**
African American	12.0%	11.9%
Other	23.4%	21.2%
Age		
18-24	22.9%	18.4%**
25-34	24.3%	22.0%
35-44	25.7%	21.2%**
45-54	23.3%	22.0%
55-64	24.3%	22.5%
65-74	19.9%	22.5%
75 and over	10.5%	15.5%**
Highest Level of Educational Attainment		
Grade School	3.8%	3.6%
Some High School	9.2%	4.3%**
High School Graduate	9.6%	9.9%
Some College	23.8%	19.7%**
College Graduate	40.6%	37.2%**
Graduate School	52.2%	49.3%

**change is statistically significant at the 95 percent confidence level

Appendix 5: Victoria and Albert Museum 2016

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SEARCH 



A Brief History of the Museum

The Victoria and Albert Museum's collections span two thousand years of art in virtually every medium, from many parts of the world, and visitors to the museum encounter a treasure house of amazing and beautiful objects. The story of the V&A's foundation helps to explain its astonishing richness and diversity.

The Museum was established in 1852, following the enormous success of the Great Exhibition the previous year. Its founding principle was to make works of art available to all, to educate working people and to inspire British designers and manufacturers. Profits from the Exhibition were used to establish the Museum of Manufactures, as it was initially known, and exhibits were purchased to form the basis of its collections.



Flacon, George Fox, about 1851. Museum no. 2743-1851. © Victoria and Albert Museum, London

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Appendix 6: The Peale Center 2016

The Peale Center

ABOUT ECONOMIC IMPACT BUDGET NEWS DONATIONS CONTACT



History

History

The Peale is the oldest museum building in the United States. It was built by Rembrandt Peale, a member of the first family of American artists. Through their explorations, scientific investigations, and museum displays, the Peales also contributed greatly to the new nation's understanding of natural history. Rembrandt commissioned architect Robert Cary Long to design the building -- essentially a Federal Period townhouse, with a rear gallery extension. It opened in August 1814. The following month, the British attacked Baltimore in the culmination of their Chesapeake campaign during the War of 1812. Afraid they would burn the city and with it his new museum, as they had the Capitol and the White House in Washington, D. C., Rembrandt, his pregnant wife and their seven children spent the night in the building during the Fort Mifflin bombardment, hoping that the British would think it was their residence and spare it.

Peale's "Museum and Gallery of the Fine Arts" opened in 1814. The featured exhibit at the opening was the famous skeleton of the mastodon unearthed by Rembrandt's father, Charles Willson Peale. Also displayed were military artifacts and stuffed birds, animals, and fish.

In 1816, Rembrandt Peale illuminated one of his painting galleries with a "magic ring" of pearls of light -- carbonized hydrogen gas. That same year he established, with a group of investors, the Gas Light Company of Baltimore. The first commercial gas light company in America, it grew into the Baltimore Gas and Electric Company and Constellation Energy, now Exelon.

Art exhibits were a mainstay of the museum. An 1823 catalog lists the following artists whose works were on display: Leonardo da Vinci, Gainsborough, Broughel, Reynolds, Bosch, van de Velde, Ruydael, Kauffman, Claude Lorraine, Poussin, Velasquez, Canaletto, Raphael, Sully. The exhibit also included works by Charles Willson Peale, then the foremost portrait painter in the country, and by members of his artistic extended family, Raphaelle, Rembrandt, and Sarah Miriam Peale. Baltimore collectors lent most of the paintings.

Shortly after Peale's Museum closed in 1826, the City of Baltimore bought the building for use as the City Hall (1830-1875). Following construction of the present City Hall, the Peale Museum building became the Male and Female Colored School Number 1 (1878-1897), which marked the beginning of public secondary education for African-Americans in Baltimore. The Bureau of Water Supply occupied it next (1887-1916). The building was finally turned into rental space for shops and factories (1916-1928).

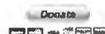
Subsequently threatened with demolition, the Peale building was rescued by the citizens. The City rebuilt it (during the Depression) and in 1931 opened the "Municipal Museum of the City of Baltimore" with the idea of preserving, collecting, and housing therein pictures, objects of art, and other articles reminiscent of official and industrial life and history of the City of Baltimore and of interest to the public generally. Architect John H. Scarff, secretary of the municipal museum, was in charge of restoration.

The municipal museum enjoyed a longer tenure (1931-1992) than any of the previous occupants of the building. Commonly known as "the Peale," it was renowned for its collection of Peale portraits and the annual art and photography exhibits. Wilbur H. Hunter, director from 1946 to 1978, built up the Peale collection of artworks. An art historian, writer, and preservationist, Hunter was an acknowledged expert on and tireless promoter of Baltimore's past and its buildings. Later on, the Peale mounted several excellent exhibits combining history and architecture, such as the nationally acclaimed "Rowhouse: A Baltimore Style of Living."

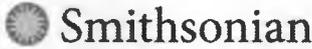
In 1982, the Peale Museum was made part of the Baltimore City Life Museums, a consortium of municipal museums and historic sites. In 1992, the BCLM was privatized, five years later it ceased operations for lack of funds. The Peale Museum was closed and its City-owned collection of paintings, illustrations, prints and photographs, architectural drawings, sculpture, furniture, and artifacts transferred by long-term lease to the Maryland Historical Society. The building has remained vacant since then.

Donate

Please help us restore and reopen to the public the Peale Museum by donating today. The Peale Center for Baltimore History and Architecture is a 501(c)3 nonprofit corporation.



Appendix 7: Smithsonian 2016



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HOME » MUSEUMS AND ZOO SHARE

D.C. Metro Area

- African American History and Culture Museum
- African Art Museum
- Air and Space Museum
- Air and Space Museum Udvar-Hazy Center
- American Art Museum
- American History Museum
- American Indian Museum
- Anacostia Community Museum
- Arthur M. Sackler Gallery
- Freer Gallery of Art
- Hirshhorn Museum and Sculpture Garden
- National Zoo
- Natural History Museum
- Portrait Gallery
- Postal Museum
- Renwick Gallery
- Smithsonian Institution Building, The Castle
- Arts and Industries Building

New York City

The Museums and Zoo

The Smithsonian Institution—the world’s largest museum and research complex—includes 19 museums and galleries and the National Zoological Park.

Most Smithsonian museums and the National Zoo are free and open every day of the year except December 25. For hours of operation, see information on planning your visit or select a museum from the list.

Note: Additional Smithsonian exhibitions and events can be found in the S. Dillon Ripley Center on the National Mall.

[Also Learn About Our Research Centers »](#)



Smithsonian Gardens »

Explore our outdoor garden exhibitions, designed to complement the museums they border and enhance your overall museum experience of learning, appreciation, and enjoyment.

From mid-April through September there are weekly garden tours available (weather permitting).



Appendix 8: Newark Museum


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Celebrate Mother's Day at the Newark Museum, Sunday, May 9, 10 am - 5 pm (Brunch and Programs for All)



HISTORY

About the Museum

The Newark Museum, in Newark, Essex County, New Jersey, is the state's largest museum. It holds fine collections of American art, decorative arts, contemporary art, and arts of Asia, Africa, the Americas, and the ancient world. Its extensive collections of American art include works by Hiram Powers, Thomas Cole, John Singer Sargent, Albert Bierstadt, Frederick Church, Childe Hassam, Mary Cassatt, Edward Hopper, Georgia O'Keeffe, Joseph Stella, Tony Smith and Frank Stella.

Founding Director John Cotton Dana believed that museums were established to promote the appreciation, understanding, and enjoyment of the arts and sciences. Together with a group of public officials, prominent businessmen and local collectors, he established the Museum in 1909 at the Newark Public Library. He provided the intellectual leadership that made it one of the most progressive cultural institutions in the country.

MISSION & GOVERNANCE ~

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Appendix 9: Smithsonian Institute Archives 2016

National Museum Act Implemented

Request permissions |  Share | Print**Title:** National Museum Act Implemented**Date:** October, 1966**Notes:** Specific date comes from 1967 Annual Report.

Annual Report of the Smithsonian Institution for the year 1972. Washington, D.C.: Smithsonian Institution Press, 1972, p. 110.

Annual Report of the Smithsonian Institution for the year 1973. Washington, D.C.: Smithsonian Institution Press, 1973, p. 148-9.

Annual Report of the Smithsonian Institution for the year 1967. Washington, D.C.: Smithsonian Institution, 1967, p. 15.

Smithsonian Institution Archives, Record Unit 7098, "S. Dillon Ripley Chronology."

Summary: The National Museum Act, authorized in 1966 and first funded in 1972, establishes a program which assists museums and their professional organizations in developing curricula in museum management. The act also funds research in museum management, conservation, exhibitions, and teaching techniques which enable museums better to serve the public and to protect national treasures.

Topics: Exhibitions, Legislation, Museum techniques, New Programs, Training

Subject: National Museum Act of 1966

Category: Chronology of Smithsonian History

Full Record: [http://sins-sihistory.si.edu/ipac20/ipac.jsp?
&profile=all&source=-1sichronology&uri=full=3100001~1864~10#focus](http://sins-sihistory.si.edu/ipac20/ipac.jsp?&profile=all&source=-1sichronology&uri=full=3100001~1864~10#focus)

Appendix 10: National Museum Act of 1966

80 STAT.] PUBLIC LAW 89-674-OCT. 15, 1966 953

(2) Section 2 of the Act of June 27, 1934 (48 Stat. 1267; 5 U.S.C. 115a), is repealed.

(3) Section 1002 of the Foreign Service Act of 1946, as amended (60 Stat. 1030; 22 U.S.C. 804), is further amended by deleting the first sentence and by striking out "however," in the second sentence.

Approved October 15, 1966.

Public Law 89-674

A N A C T

October 15, 1966

Relating to the National Museum of the Smithsonian Institution.

f^~ i3io}

Whereas the museums of the Nation constitute cultural and educational institutions of great importance to the Nation's progress; and

Whereas national recognition is necessary to insure that museum resources for preserving and interpreting the Nation's heritage may be more fully utilized in the enrichment of public life in the individual community: Now, therefore,

Be it enacted by the Senate and House of Representatives of the

United States of America in Congress assembled, That this Act may be cited as the "National Museum Act of 1966".

National Mu-
Act of 1966.
"nutieVof direc

SEC. 2. (a) The Director of the National Museum under the direction of the Secretary of the Smithsonian Institution shall—

(1) cooperate with museums and their professional organizations in a continuing study of museum problems and opportunities, both in the United States and abroad;

(2) prepare and carry out programs for training career employees in museum practices in cooperation with museums and their professional organizations, wheresoever these may best be conducted;

(3) prepare and distribute significant museum publications;

(4) perform research on, and otherwise contribute to, the development of museum techniques;

(5) cooperate with departments and agencies of the Government of the United States operating, assisting, or otherwise concerned with museums; and

(6) report annually to the Congress on progress in these activities.

(b) There is authorized to be appropriated to carry out this Act, not to exceed, \$200,000 for the fiscal year ending June 30, 1968, \$250,000 for the fiscal year ending June 30, 1969, \$250,000 for the fiscal year ending June 30, 1970, and \$300,000 for the fiscal year ending June 30, 1971, and in each subsequent fiscal year, only such sums may be appropriated as the Congress may hereafter authorize by law.

SEC. 3. The first paragraph under the heading "National Museum" contained in the Act of July 7, 1884 (23 Stat. 214; 20 U.S.C. 65), is amended by deleting the following sentence: "And the Director of the National Museum is hereby directed to report annually to the Congress the progress of the museum during the year and its present condition,"

Approved October 15, 1966.

Appendix 11: Rubin 2015, pg. 67

		TEA		AECOM	
Rank	Museum and Location	% change	2014	2013	Admission
1	NATIONAL MUSEUM OF NATURAL HISTORY, Washington, D.C.	-8.8%	7,300,000	8,000,000	Free
2	NATIONAL AIR AND SPACE MUSEUM, Washington, D.C.	-3.9%	6,700,000	6,970,000	Free
3	THE METROPOLITAN MUSEUM OF ART, New York, NY	0.0%	6,280,000	6,280,000	Paid
4	AMERICAN MUSEUM OF NATURAL HISTORY, New York, NY	0.0%	5,000,000	5,000,000	Paid
5	NATIONAL MUSEUM OF AMERICAN HISTORY, Washington, D.C.	-18.4%	4,000,000	4,900,000	Free
6	NATIONAL GALLERY OF ART, Washington, D.C.	-5.1%	3,892,000	4,100,000	Free
7	THE MUSEUM OF MODERN ART, New York, NY	7.9%	3,020,000	2,800,000	Paid
8	CALIFORNIA SCIENCE CENTER, Los Angeles, CA	0.0%	2,630,000	2,630,000	Free
9	HOUSTON MUSEUM OF NATURAL SCIENCE, Houston TX	11.2%	2,372,000	2,133,000	Paid
10	U.S. HOLOCAUST MEMORIAL MUSEUM, Washington, D.C.	13.8%	1,564,000	1,374,000	Paid
11	MUSEUM OF SCIENCE, Boston, MA	1.8%	1,446,000	1,420,000	Paid
12	THE J. PAUL GETTY CENTER, Los Angeles, CA	6.3%	1,441,000	1,356,000	Free
13	DENVER MUSEUM OF NATURE & SCIENCE, Denver, CO	10.0%	1,430,000	1,300,000	Paid
14	THE ART INSTITUTE OF CHICAGO, Chicago, IL*	-6.7%	1,400,000	1,500,000	Paid
	MUSEUM OF SCIENCE AND INDUSTRY, Chicago, IL*	0.0%	1,400,000	1,400,000	Paid
	CALIFORNIA ACADEMY OF SCIENCES, San Francisco, CA*	0.0%	1,400,000	1,400,000	Paid
17	NATIONAL MUSEUM OF THE AMERICAN INDIAN, Washington, D.C.	-4.6%	1,300,000	1,363,000	Free
18	UDVAR-HAZY CENTER, Washington, D.C.	0.0%	1,300,000	1,300,000	Free
19	FIELD MUSEUM OF NATURAL HISTORY, Chicago, IL	-4.4%	1,229,000	1,286,000	Paid
20	THE CHILDREN'S MUSEUM OF INDIANAPOLIS, Indianapolis, IN	-0.4%	1,210,000	1,215,000	Paid
TOTAL		-2.6%	53,514,000	54,927,000	

Figure 138 *Ties are counted only once in total

© 2015 TEA / AECOM 67

Appendix 12: Museum of Science 2016



Museum History

Boston Society of Natural History

In 1830, six men interested in natural history established the Boston Society of Natural History, an organization through which they could pursue their common scientific interests. Devoted to collecting and studying natural history specimens, the society displayed its collections in numerous temporary facilities until 1864, when it opened the New England Museum of Natural History at the corner of Berkeley and Boylston Streets in Boston's Back Bay. That museum is now known worldwide as the Museum of Science, Boston. One of the world's largest science centers and Boston's most attended cultural institution, the Museum attracts approximately 1.5 million visitors a year through its vibrant programs and 700 interactive exhibits.



Appendix 13: American Alliance of Museums (AAM) 2012



American
Alliance of
Museums

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American Association of Museums Is Now the American Alliance of Museums

106-Year Old Organization Seeks to Better Serve, Unite America's Museums

WASHINGTON, D.C. (Sept. 5, 2012) — The American Association of Museums, the largest service and advocacy group for museums of all types and sizes, has changed its name to the American Alliance of Museums (the Alliance) and adopted a new tagline and logo. This is to better reflect the 106-year old organization's mission of unifying the diverse museum field, championing its cause and nurturing excellence among all of America's museums.



American
Alliance of
Museums

Champion Museums. Nurture Excellence.

"Our new beginning and brand is designed to help us truly unite the museum field—from art museums to zoos and everything in between—so that we may more effectively advocate for the cause of museums," said AAM president Ford W. Bell. "Speaking with one voice, the breadth of the U.S. museum field will be able to make the case that museums are essential to our educational infrastructure, essential to our economic prosperity, and essential to building communities everywhere."

The change from "Association" to "Alliance" may seem simple, but it embodies the organization's primary mission as it grows into its second century.

"By definition, an alliance is an entity forged for the mutual benefit of all," said Meme Omogbari, chair of the Alliance board of directors and chief operating officer of the Newark Museum in New Jersey. "That is the essence of the new American Alliance of Museums — to re-ignite an organization into one whose aim is to benefit all: our museums, the individuals who work in them and the communities they serve."

With the adoption of the Alliance strategic plan in 2009 — dubbed "The Spark" — the organization systematically surveyed the range of its membership to determine how it could best serve America's museums. This feedback informed an entirely new museum membership structure and a new Continuum of Excellence. Details for both the three-tiered membership structure and the Continuum of Excellence are available on the new Alliance website (www.aam-us.org).

The new museum membership structure reflects the Alliance's belief that uniting the field is paramount. It includes a basic membership tier, designed for the thousands of smaller institutions in the U.S. to "pay what they can," embracing a practice employed by many museums to allow all community members access to their collections.

The Continuum of Excellence's mark of distinction is accreditation, also being re-designed to be more accessible and meaningful for all museums. The Alliance leadership and board of directors determined that a more high-profile accreditation program, with wider participation, can be an invaluable tool in conveying the essential nature of American museums to all levels of government and to the public. The new accreditation program will debut later in the year.

"Some may ask, after 106 years of supporting and building the museum community, why would we change our name and brand?" Bell said. "Simply, our new name signals our resolve to unite the museum field so that we can speak with one strong voice. We are no longer the trade association for museums, but rather the cause of museums."

"Moreover, our new brand goes far beyond mere cosmetics," Bell continued. "Our brand as the American Alliance of Museums is emblematic of our commitment to advancing the cause of museums — as well as supporting those who work in museums, donate to them, or simply love them — and the communities served by America's museums."

The American Alliance of Museums has been bringing museums together since 1906, helping to develop standards and best practices, gathering and sharing knowledge, and providing advocacy on issues of concern to the entire museum community. With more than 18,000 individual, 3,000 institutional and 300 corporate members, the Alliance is dedicated to ensuring that museums remain a vital part of the American landscape, connecting people with the greatest achievements of the human experience — past, present and future. For more information, visit www.aam-us.org.

AAM 2016a

Alliance Accredited Institutions as of March 2014

Berkeley Art Museum and Pacific Film Archive, University of California Berkeley, CA	History San Jose San Jose, CA	Natural History Museum of Los Angeles County <ul style="list-style-type: none"> • George C. Page Museum of La Brea Discoveries • William S. Hart Museum Los Angeles, CA
Bowers Museum Santa Ana, CA	J. Paul Getty Museum Los Angeles, CA <ul style="list-style-type: none"> • Getty Villa, Pacific Palisades 	Oakland Museum of California Oakland, CA
California Academy of Sciences San Francisco, CA	Japanese American National Museum Los Angeles, CA	Pacific Asia Museum Pasadena, CA
California Science Center Los Angeles, CA *	The Lindsay Wildlife Museum Walnut Creek, CA	Pacific Grove Museum of Natural History Pacific Grove, CA
Chula Vista Nature Center Chula Vista, CA	Long Beach Museum of Art Long Beach, CA	Palm Springs Desert Museum Palm Springs, CA
Crocker Art Museum Sacramento, CA	Los Angeles County Museum of Art Los Angeles, CA	Phoebe Apperson Hearst Museum of Anthropology, University of California Berkeley, CA
De Saisset Gallery and Museum, Santa Clara University Santa Clara, CA	Los Angeles Zoo and Botanical Gardens * Los Angeles, CA	Rancho Santa Ana Botanic Garden at Claremont Claremont, CA
Descanso Gardens La Cañada, CA	March Field Air Museum March Air Reserve Base, CA	Raymond M. Alf Museum of Paleontology Claremont, CA
Fine Arts Museums of San Francisco <ul style="list-style-type: none"> • M.H. de Young Memorial Museum • California Palace of the Legion of Honor San Francisco, CA 	Mingei International Museum San Diego, CA	Riverside Metropolitan Museum Riverside, CA
Fresno Art Museum Fresno, CA	Monterey Museum of Art Monterey, CA	Robert and Frances Fullerton Museum of Art (RAFFMA) Cal State San Bernardino San Bernardino, CA
Haggin Museum Stockton, CA	The Museum of Contemporary Art Los Angeles Los Angeles, CA	San Bernardino County Museum and Historic Sites Redlands, CA
Hearst Art Gallery, St Mary's College Moraga, CA	Museum of Contemporary Art San Diego La Jolla, CA	San Diego Aerospace Museum San Diego, CA
Hearst San Simeon State Historical Monument (Hearst Castle) San Simeon, CA	Museum of Photographic Arts San Diego, CA	

* Institutions also accredited by the Association of Zoos and Aquariums (AZA)

AAM 2016b



**American
Alliance of
Museums**

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About Us

"The American Alliance of Museums' mission is to nurture excellence in museums through advocacy and service."

What We Do

The American Alliance of Museums (formerly the American Association of Museums) is the one organization that supports all museums. Through advocacy and excellence, the Alliance strengthens the museum community. We support 30,000 museums, individuals and companies by:

- Developing standards and best practices
- Providing resources and career development
- Advocating for museums to thrive

Who We Are

- art museums
- history museums
- science museums
- military and maritime museums
- youth museums
- aquariums
- zoos
- botanical gardens
- arboretums
- historic sites
- science and technology centers
- museum-service companies
- state museum associations
- regional museum associations
- directors
- curators
- registrars
- educators
- exhibit designers
- public relations officers
- development officers
- security managers
- trustees
- volunteers

Appendix 14: *Excellence in Practice* 2002, Cover page and pg.2

Today most museums continue to struggle with the political realities of implementing the primary premise of *Excellence and Equity*: to combine "intellectual rigor with the inclusion of a broader spectrum of our diverse society." With increased responsibility and scrutiny, the museum educator's role has been shifted, revised, reformed, and stretched in unimaginable ways. As the Committee on Education releases its revised Principles and Standards, it does so a little older and a little wiser.

For two years a working draft has circulated to members of the museum community, through mailings to EdCom members, discussions at regional and national meetings, and finally at working roundtables during the 2001 Annual Meeting at St. Louis. The final product, *Excellence in Practice: Museum Education Principles and Standards* combines key concepts of the 1990 standards with current directions in best practice. The 2002 document is more descriptive of the complexity of engaging a diverse audience in vital and meaningful learning experiences. It stresses the importance of interdepartmental teamwork in the achievement of the museum's education mission; the responsible use of new technologies; an emphasis on rigorous planning, implementation, and assessment; and the importance of public advocacy to the future stability and strength of museums.

Excellence in Practice 2002, pg.6

Museums are committed to sharing their remarkable resources for the advancement of knowledge and the nourishment of the human spirit. All museum trustees, employees, and volunteers should work together to ensure that:

- a museum's mission articulates its commitment to present its educational resources with accuracy, clarity, and relevance to a wide variety of audiences;
- interpretive programs seek out multiple perspectives in the exchange of ideas and in the collection and presentation of objects;
- information gathering and assessment provide evidence of visitor learning and the museum's impact;
- appropriate technologies are used to expand access to knowledge and self-directed learning;
- the museum working environment is respectful of different voices as institutional policies, programs, and products are shaped.

Museum educators are specialists who help museums fulfill their educational mission. They recognize that many factors affect the personal, voluntary learning that occurs in museums. They seek to promote the process of individual and group discovery and to document its effect. On museum teams, museum educators serve as audience advocates and work to provide meaningful and lasting learning experiences for a diverse public.

Since there is no single way to fulfill a museum's educational mission, and museum education includes a broad range of responsibilities, the following principles of best practice for education in museums and professional standards for museum educators provide guidelines for all museum professionals who are concerned with the needs of museum visitors.

These principles and standards are organized into three functional areas related to museum education: accessibility, accountability, and advocacy.

Appendix 15: Association of Science-Technology Centers (ASTC) 2016a

The screenshot shows the ASTC website interface. At the top, the logo reads 'ASTC ASSOCIATION OF SCIENCE TECHNOLOGY CENTERS'. Navigation links include 'Home', 'ASTC Community myASTC', 'MARKETPLACE', 'JOB BANK', 'PUBLICATIONS', 'FIND A SCIENCE CENTER', and '#MYSCIMUSEUM'. A secondary menu contains 'ABOUT ASTC', 'MEMBERSHIP', 'PROFESSIONAL DEVELOPMENT', 'ADVOCACY', and 'CONFERENCE'.

The main content area is titled 'ABOUT ASTC'. It includes a left-hand navigation menu with categories such as 'ABOUT ASTC', 'ABOUT SCIENCE CENTERS', 'LEADERSHIP', 'SUPPORT ASTC', 'GLOBAL INITIATIVES', 'PARTNERSHIPS / SPECIAL PROJECTS', 'AWARDS', 'NEWS & REPORTS', 'PUBLICATIONS', 'CONTACT US', and 'RECENT NEWS'.

The main text under 'ABOUT ASTC' defines the organization as a global organization providing collective voice, professional support, and programming opportunities for science centers, museums, and related institutions. It notes that ASTC was founded in 1973 and now represents over 600 members in nearly 50 countries. Major programs and services provided include:

- Sponsoring the ASTC Annual Conference, the premier professional development gathering for the science center and museum field;
- Convening dialogue, learning opportunities, and information exchange through Communities of Practice (CoPs) and other professional development programs and discussion forums;
- Publishing *Dimensions*, the award-winning bimonthly magazine of the science center field, and *INFORMER*, a biweekly email newsletter;
- Tracking and analyzing trends in the science center field;
- Promoting international action on global science issues, and aiding in the development of science centers across the world;
- Representing science center interests before the U.S. Congress and federal agencies;
- Promoting equity and diversity by providing members with resources and tools to increase the number of individuals from underrepresented and/or underserved groups who visit and work in museums; and
- Supporting and housing the Center for Advancement of Informal Science Education (CAISE).

The 'Equity and Diversity Initiative Mission' section states that the organization's commitment to equity and diversity will be reflected in its collective efforts to create a dynamic process that helps members build awareness and understanding of the needs and the promise of their communities, and subsequently, implement practices and policies that:

- Ensure that boards and staff at every level reflect, welcome, celebrate, and benefit from diversity;
- Develop exhibits, programs, and print materials that reflect, welcome, celebrate, and benefit from the diverse communities currently and potentially served by ASTC members;
- Work in partnership with diverse constituents (visitors, funders, contractors supporters, etc.) to identify ways to meet their needs; and
- Engage in dialogues that examine issues of diversity and equity with a proactive commitment to fundamental human rights.

The 'RECENT NEWS' section features an article titled 'International Science Center and Science Museum Day 2016' by Christine Ruffo, dated November 10, 2016. The article mentions the occasion of World Science Day for Peace and Development and a partnership with the United States.

Appendix 16: Wilson 2016

The Second Principle

The work of Leslie Owen Wilson, Ed. D.

CREATIVITY

HOME PAGE

INSTRUCTIONAL DESIGN

OPTIMAL LEARNING

RECOMMENDATIONS

TEACHING ESSENTIALS

The second principle of magic:

“Things which have once been in contact with each other
continue to act on each other at a distance even
after the physical contact has been severed.”

James Frazer



The Eighth Intelligence - Naturalistic Intelligence

Naturalistic Intelligence - What is it?

© Leslie Owen Wilson

Background: As many readers may know already, in 1983 Multiple Intelligence Theory was first put forth by Professor Howard Gardner in his groundbreaking book, *Frames of mind*. For his work on broadening our understanding of human intelligence Gardner received one of the prestigious MacArthur Fellowship Awards.

Gardner's career has had many facets. He was the Hobbs Professor of Cognition and Education at Harvard's Graduate School of Education, and an adjunct professor of neurology at Boston University. He is also the Director of Project Zero at Harvard and has many other degrees and prestigious awards and positions. By combining his areas of interest and expertise, one of the great strengths of Gardner's work is that he accurately pinpointed parts of the brain as these correlated to each of his described intelligences. Gardner used this neurological evidence to help justify the credibility of his theory by noting that humans could actually lose an ability or intelligence through disease or injury.



Over the past 30+ years Gardner's MI theory has become popular with both teachers and parents as a tool for explaining and differentiating the talents and gifts of children. The dissemination of this important theory to non-academic audiences owes its success to a number of secondary authors who have been helpful in interpreting Gardner's works specifically for teachers and/or parents (see resource list). These secondary authors have given readers information so that they might easily recognize the array of talents in children and students through descriptive narratives, case studies, and observational checklists. This information has helped many teachers and parents better understand how to use children's strengths to improve or heighten cognition and learning.

While initially Professor Gardner described seven aspects of human intelligence as being verbal/linguistic; mathematical/logical; spatial; musical; kinesthetic; interpersonal; and intrapersonal, in 1994 he began to herald, describe, and publicize the addition of an eighth intelligence, "naturalistic intelligence" (or "nature smarts"). Naturalistic intelligence was then more fully described and officially added to his original array of seven intelligences in 1999 in his book *Intelligence Reframed*.

It has been speculated that naturalistic intelligence was undoubtedly the one that aided our ancient hunter-gatherer ancestors in identifying which flora and fauna were edible and which were not. Too "nature smarts" may have helped early humans in noticing patterns and changes in their surroundings and environments so that they could thrive and survive. This intelligence is seated in the parts of the brain responsible for recognizing patterns, for making subtle connections, and is specific to those areas of the brain responsible for acute sensory perceptions, as well as object discrimination and classification.

General Descriptions and Indicators for Being Nature Smart

For parents and teachers interested in recognizing "nature smarts" in children, here is a summary of some of Gardner's ideas and core concepts, as well as an observational checklist of possible indicators.

General Description: Naturalist intelligence deals with sensing patterns in and making connections to elements in nature. Using this same intelligence, children possessing enhanced levels of "nature smarts" may be very interested in human behaviors, or the behaviors, habits, or habitats of other species. They may have a strong affinity to the outside world or to specific animals, and these interests often begin at an early age. Children possessing naturalistic intelligence may enjoy subjects, shows, and stories that deal with animals or natural phenomena, or they may show unusual interest in subjects like biology, zoology, botany, geology, meteorology, paleontology, or astronomy.

Children displaying "nature smarts" are often keenly aware of their surroundings and changes in their environments, even if these shifts are at minute or subtle levels. This awareness is due to their highly developed levels of sensory perception. The heightened senses may help them notice similarities, differences, and changes in their surroundings more rapidly than others do. Kids with "nature smarts" may be able to categorize or catalog things quite easily. As children they often like to collect, classify, or read about things from nature — rocks, fossils, butterflies, feathers, shells, and the like.

Appendix 17: Visual Thinking Strategies (VTS) 2016a

**VISUAL
THINKING
STRATEGIES**

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History

Visual Thinking Strategies is the result of more than fifteen years of collaboration between cognitive psychologist Abigail Housen, veteran museum educator Philip Yenawine, and their colleagues. As Director of Education at The Museum of Modern Art from 1983-1993, Yenawine was primarily concerned with making museum education programs more effective. His research introduced him to the work of Abigail Housen in 1988.

Housen, a Harvard-trained educator and psychologist, conducted empirical research exploring how viewers, experienced and novice, think when looking at art objects. The culmination of her many years of study, Housen's Theory of Aesthetic Development, identifies five distinct patterns of thinking that correlate to the amount of exposure subjects have had to art. This research became the core of VTS.

VUE, a non-profit organization, was formed in 1995. VUE's mission would be to test and implement Visual Thinking Strategies throughout the United States and abroad in urban and rural settings, with students who struggle to learn; and across languages and cultures. Today VTS is used in dozens of schools across the country and Europe. Our research continues to confirm that VTS is an effective means of developing critical thinking and communication skills with every demographic.



VTS 2016b

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Vision

Imagine classrooms where educators use the power of visual art to guide students in inspiring conversations. Every student's perspective is valued and builds deeper engagement and thinking. All of our students are actively participating in their learning. They learn from one another, respect each other, listen and understand there are multiple ways to see any given situation. Our students are curious, lifelong learners and thoughtful citizens contributing to a diverse and changing world. Visual Thinking Strategies is an educational curriculum and teaching method which enables students to develop aesthetic and language literacy and critical thinking skills, while giving teachers a powerful new technique they can utilize throughout their career.

Mission

VTS transforms the way students think and learn through programs based in theory and research that use discussions of visual art to significantly increase student engagement and performance.



Learn More:

- [VTS Downloads](#)
- [Research & Theory](#)

VTS 2016c

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Method & Curriculum

VTS Facilitation Method 101

In VTS discussions, teachers support student growth by facilitating discussions of carefully selected works of visual art.

Teachers are asked to use three open-ended questions:

- What's going on in this picture?
- What do you see that makes you say that?
- What more can we find?

3 Facilitation Techniques:

- Paraphrase comments neutrally
- Point at the area being discussed
- Linking and framing student comments

Students are asked to:

- Look carefully at works of art
- Talk about what they observe
- Back up their ideas with evidence
- Listen to and consider the views of others
- Discuss many possible interpretations

Curriculum & Materials:

- All VTS curricula are sequential and developmentally-based
- Grades K-5 include 10 lessons per year
- 2-3 images per lesson
- After Grade 2, students make one museum visit per year
- Purchase VTSweb subscriptions or classroom curriculum materials here.

To purchase VTS curriculum materials:

- Visit VTSWeb.org for hard copy materials including poster sets, and image discs.
- Visit VTSWeb.org for subscription-based curriculum and interactive web resources for teachers.

To learn more about becoming a VTS Trainer, or to learn about how to bring VTS to your school, or develop a VTS program at your institution, visit:

- [VTS Training](#)
- [VTS School Program](#)
- [Other Program Sites](#)

"Art affords an ideal environment for [fostering critical and creative thinking]. It provides an object of collective attention—something concrete for a classroom to observe and experience, provoking thoughts and feelings while at the same time generating simultaneous and distinctive meanings."

-Abigail Housen, from *Art Viewing and Aesthetic Development*

Appendix 18: University College London 2016

UCL MUSEUMS & COLLECTIONS 

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- ① About
- ① Visit
- ① What's on
- ① Research
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Introduction to object based learning

UCL Museums and Collections offers a wide range of high quality museum collections, digital resources and innovative ideas for teaching in the University.



UCL M&C - Introduction to UCL Museums and Collections

UCL M&C - Petrography - UCL Museums and Collections

UCL M&C - An Introduction to Object Based Learning

UCL M&C - Object based Learning - UCL Crossform Wet Laboratory

For guidance and support on how to make use of UCL's diverse museum collections in your undergraduate and postgraduate teaching please contact the Teaching Fellow in Object Based Learning, Thomas Kador at t.kador@ucl.ac.uk.

Benefits of using real objects in learning

- ① They provide a direct link with a topic or 'the past' and can really enhance young people's interest in and understanding of a topic/subject.
- ① They encourage learners to use all their senses – especially touch, sight and smell.
- ① They help to develop the important skill of drawing conclusions based on an examination of evidence, together with an understanding of the limitations and reliability of evidence.
- ① They are ideal for generating group and class discussion.
- ① They promote the value of museums and encourage young people to visit museums and galleries with their families to further their learning.

Appendix 19: Museum Movement Techniques (MMT) 2016

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ovement Techniques©

- Home page
- Training Workshops
- Prize Gallery
- Stream & Media
- Shelley K. Weisberg
- MMT Handbook
- Resources



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Museum Movement Techniques engage and empower children to discover and create personal meaning for museum objects.

What is Museum Movement Techniques (MMT)?

Museum Movement Techniques (MMT) is an original approach using movement strategies to learn about museum objects. Based on theories supportive of using movement as a catalyst to learn, MMT integrates kinesthetic learning and museum education principles.

Training Workshops:
Three Variations of Facilitation

Museum Movement Techniques are appropriate for three groups of professionals with three different levels of skills: The museum educator, the classroom educator and the movement educator.

Workshop topics include:

- understanding of rationale techniques
- qualitative research
- museum object selection criteria
- educational linking to national competency standards.
- assessment tools

Museum Educators: Workshops

MMT Workshop enables museum educators to broaden their audience base by including the kinesthetic learner. Workshops are designed to allow educators to experience techniques and then craft experiences using MMT to meet their educational objectives

Classroom Educators: Workshops

MMT Workshop develops an understanding of how kinesthetic learning strategies embellish educational objectives and provides an integrated arts learning experience. Emphasis is placed on meaningful connections between arts learning and curriculum connections.

Movement Educators: Workshops

MMT Workshop provides background understanding of important museum policy issues and educational philosophy. Emphasis is placed on MMT skills that elicit personal movement interpretation of museum object.

Appendix 20: ACT for Youth 2016


Your Online Source for Positive Youth Development

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Home » Youth Development » Youth Engagement » What is Youth Engagement, Really?

Youth Engagement

What is Youth Engagement, Really?

Authentic Youth Engagement

Youth Engagement in Programs

Youth Engagement in Organizations

Youth-Adult Partnerships

Youth Voice

When young people and adults work together to get things done, what makes a good youth-adult partnership?

Communication

Be/y able to understand each other

Lots of energy, excited toward strengthening the relationship

Effort on both sides

Shouldn't damage ideas

Share 50/50

Eliminate hierarchy

Sensitivity

What doesn't work well?

Yelling

Hypocrisy

Miscommunication

Fail to meet

Unclear/WT

Low

Level of follow through

Thinking you're better than your partner

Having a negative attitude

New York City University of the ACT Youth Network

What is Youth Engagement, Really?

cristina-ford.com



Youth engagement is one of the buzzwords in the youth development field. Similar terms are youth voice, youth involvement, youth participation, and youth in governance.

What does youth engagement mean?

Youth engagement is the result when young people are involved in responsible, challenging actions to create positive social change.

- This means involving youth in planning and in making decisions that affect themselves and others.
- Youth engagement happens in youth-adult partnerships that are structured so that both groups contribute, teach, and learn from each other.

Why is youth engagement important?

Youth engagement is a central principle of youth development. According to the ecological perspective of human development, young people are agents of their own development. Youth are more than passive recipients of external influences; instead they are actively involved in shaping their development by interacting with the people and opportunities made available within their environments. Through youth engagement, communities can do a better job of creating the services, opportunities, and supports that young people need to develop in healthy ways. Youth engagement offers community leaders the expertise and partnership of young people, helping adults fully understand what it is like to grow up in a rapidly changing world. From a political point of view, youth engagement is important because young people deserve the right to represent their own interests. Youth civic engagement is also critically important to prepare young people to be active citizens in a democracy.

What are the benefits of youth engagement?

Youth engagement is a win-win proposition.

- Young people benefit by gaining skills, knowledge, self-esteem, and connectedness.
- Adults benefit by enhancing their own capabilities, learning to better understand and value youth, and increasing their commitment and energy to their organizations.
- Organizations benefit by improving their programs, gaining community recognition, and attracting funders.
- Communities benefit by improving quality of life, coordinating youth services, and authentically embracing diversity by representing young people.

Resources for Youth Engagement

Youth in Decision Making (PDF): This University of Wisconsin-Madison study looks at the impact of youth engagement on adults and organizations.

Strengthening Communities through Youth Participation (PDF): Authored by the Center for Nonprofits at the University of Wisconsin-Madison, this study explores how ACT for Youth communities responded to the challenges of youth engagement, presenting lessons learned and identifying strategies and outcomes at the community level.

Youth as Evaluators: Youth participation evaluation (YPE) is an approach that engages young people in evaluating the programs, organizations, and systems designed to serve them... learn more about YPE in the evaluation section of the ACT for Youth website.

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Appendix 22: New York Hall of Science 2016



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Science in the Park
 NYSCI After Dark
 This Weekend – Live from the Artists Den at NYSCI
 The Power of Collaboration
 Making America Love Math Again
 Spring School's Out 2016 week!
 Making a Platform for Empowerment

The Science Career Ladder is NYSCI's signature education program. It is an opportunity for high school and college students to work at NYSCI and also participate in mentoring, professional development and career preparation activities.

As Explainers on our exhibit floor, Science Career Ladder students are the face of NYSCI. They explain our exhibits, perform demonstrations, support educational workshops and act as role models to students in NYSCI's out-of-school camps and clubs. Explainers are easily recognized by their trademark red aprons.

Since 1985, more than 3,000 students have worked as Explainers at NYSCI. Since its inception, the Science Career Ladder has had the mission of encouraging young men and women from across New York City to pursue careers in science, technology, or education. While working at NYSCI, Explainers benefit from career workshops, networking opportunities, introductions to a range of professions, opportunities to apply for residencies and participate in research, exhibit development and educational outreach.

The history of the Science Career Ladder is chronicled in this 2010 report.

Do you want to apply for a job as an Explorer? We generally hire three times a year and ask for a commitment of at least one year from all Explainers. [Learn more](#)

Appendix 23: Art Museum Teaching 2016

ART MUSEUM TEACHING

a community of museum educators

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SPOTLIGHT ON PRACTICE, TEENS IN MUSEUMS

UNPLUGGING TO PLUG IN: ENCOURAGING REFLECTIVE PRACTICE

📅 MARCH 8, 2016 📍 CHELSEA
EMELIE KELLY 🗨️ 3 COMMENTS

Written by Chelsea Emelie Kelly, Park Avenue Armory

This article is a case study about the impact of "unplugging" as it relates to reflective practice for youth and educators. If you're interested in exploring reflection more broadly, and you'll be attending the [2016 National Art Education Association Conference](#) in Chicago next week, please join Mike Murawski and myself for our session "[Reflective Practice in Museum Education](#)" on Thursday, March 17 at 12 noon (McCormick Place/Lakeside Center/E271a). We'll unpack reflective practice for museum educators in an interactive, conversational session—we hope to see you there! If you can't join us, please comment here, tweet us [@chelseaemelie](#) and [@murawski27](#), or follow [#NAEReflect](#).

RECENT POSTS

Visitor Response Cards: What To Do When the Exhibition Is Over
April 12, 2016

Podcast: 4 Museum Educators & 4 Days at SXSWedu
March 14, 2016

Unplugging to Plug In: Encouraging Reflective Practice
March 8, 2016

How To Give a Good Conference Session
March 4, 2016

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February 8, 2016

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Special thanks to Museum Hack in New York City for their sponsorship of ArtMuseumTeaching.com and helping us remove ads from this site. They love museums (and the ArtMuseumTeaching community). See their News page or find them

Appendix 24: Iyengar 2012, cover page



Iyengar 2012, Table of Contents

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Iyengar 2012, pg. 17

Visual Arts in General

The 2012 SPPA includes questions about visits to art museums or galleries, attendance at visual arts festivals or craft fairs, and visits to parks, monuments, buildings, or neighborhoods for those places' historic or design value.

People attending visual arts sites or events. Forty-nine million U.S. adults (21 percent of all adults) went to an art museum or art gallery at least once in the 12 months ending in July 2012, and 53 million (22 percent) went to a craft fair or visual arts festival. Since 2002, the percentage of adults going to an art museum or art gallery has declined (Figure 1-14). The overall attendance estimates between 2002 and 2012 are not comparable because the SPPA questions on attending craft fairs or festivals were quite different.

The number of adults visiting parks or monuments or touring buildings or neighborhoods for their "historic or design value" dropped significantly from 2002 to 2008 and then leveled off. About 24 to 25 percent went to at least one of those sites in 2008 and 2012, a drop from 32 percent in 2002. Although the decline from 2008 to 2012 is statistically significant, it is a modest change.

Between 2002 and 2008, attendance at craft fairs dropped 9 percentage points, but 2012 attendance rates were only slightly lower than in 2008. (See Figure 1-13.)

From 2002 to 2008, the percentage of adults touring a park, monument, building or neighborhood or monument for historic or design purposes dropped seven points, from 2008 to 2012 there was an additional one-point decline. From 2002 to 2008 the percentage visiting an art museum or gallery dropped four points, and the share fell another two points in 2012.

Visits. Adults made about 132 million visits to art museums and art galleries in 2012, and, on average, attendees went 2.7 times (Figure 1-14). Between 2002 and 2008 the number of visits declined substantially (by about 42 million), but between 2008 and 2012 the drop was smaller (a difference of about 16 million).

The 2008 and 2012 SPPAs did not track the number of visits per respondent to visual art festivals and craft fairs or to parks, monuments, buildings, and neighborhoods of historic or design value.

Figure 1-13. Percentage of U.S. adults attending visual arts activities or events: 2002, 2008, and 2012

	2002	2008	2012
Art museums/ galleries	26.5%	22.7%	21.0%
Visual arts festivals or craft fairs	33.4	24.5%	22.4%
Parks, monuments, buildings, or neighborhoods visited for historic or design value	31.6%	24.9%	23.9%

Gray shaded box indicates that the estimate is significantly different from the 2012 estimate at the .05 level.

Figure 1-14. Average number of visits per attendee and millions of visits to art museums or galleries: 2002, 2008, and 2012

	2002	2008	2012
Art museums/ galleries	3.5	2.9	2.7
Millions of visits to art museums/ galleries	160M	118M	132M

Gray shaded box indicates that the estimate is significantly different from the 2012 estimate at the .05 level.

lyengar 2012, pg. 20

Figure 1-15. Demographic distribution of U.S. adults attending different types of visual arts events at least once in the past 12 months: 2012

	2012 U.S. Population		Art museums or galleries 2012	Craft fairs and visual arts festivals 2012	Places visited for design or historic setup 2012
	Millions	Percent			
ALL ADULTS	235.0				
Gender					
Male	113.1	48.1%	42.9%	38.9%	46.4%
Female	121.9	51.9%	57.1%	61.1%	53.6%
Total		100.0%	100.0%	100.0%	100.0%
Race/ethnicity					
Hispanic	35.0	14.9%	10.1%	11.1%	8.5%
White	155.7	66.3%	76.0%	77.4%	78.6%
African American	26.8	11.4%	6.5%	6.7%	6.2%
Other	17.5	7.4%	7.4%	5.4%	6.6%
Total		100.0%	100.0%	100.0%	100.0%
Age					
18-24	30.4	13.0%	11%	10.4%	11.0%
25-34	41.0	17.4%	18.4%	16.8%	18.3%
35-44	39.6	16.9%	17.1%	16.6%	16.5%
45-54	43.7	18.6%	19.5%	20.4%	20.5%
55-64	38.3	16.3%	17.5%	18.8%	18.1%
65-74	23.8	10.1%	10.9%	11.7%	10.8%
75+	18.1	7.7%	5.7%	5.2%	4.9%
Total		100.0%	100.0%	100.0%	100.0%
Highest level of education					
Grade school	9.9	4.2%	0.7%	1%	0.7%
Some high school	79.0	33.6%	1.7%	2.9%	2.0%
High school graduate	70.9	30.2%	14.1%	21.8%	16.7%
Some college	68.7	29.2%	27.3%	30.6%	30.4%
College graduate	43.0	18.3%	32.7%	27.1%	29.7%
Graduate school	23.5	10.0%	23.5%	16.4%	20.4%
Total		100.0%	100.0%	100.0%	100.0%
Family income					
Less than \$20K	40.9	17.4%	8.4%	9.5%	8.7%
\$20K to \$50K	76.0	32.3%	21.6%	25.8%	22.0%
\$50K to \$75K	43.9	18.7%	19.6%	20.5%	19.7%
\$75K to \$100K	27.6	11.7%	15.0%	15.3%	15.0%
\$100K to \$150K	27.1	11.5%	18.4%	15.5%	18.6%
\$150K and over	19.6	8.3%	17.0%	13.4%	16.1%
Total		100.0%	100.0%	100.0%	100.0%

Iyengar 2012, pg. 21

Figure 1-16. Visual arts rates of attendance (based on adults participating at least once in past 12 months), by demographic group: 2002 and 2012

	Art museum or gallery 2002	Art museum or gallery 2012	Craft fairs and arts festivals 2002 ⁴	Craft fairs and visual arts festivals 2012	Places visited for design or historic value 2002	Places visited for design or historic value 2012
Gender	26.5%	21.0%	33.4%	22.4%	31.6%	23.9%
Male	24.6%	18.7%	27.0%	18.2%	30.5%	23.1%
Female	28.2%	23.1%	39.2%	26.4%	32.5%	24.6%
Race/ethnicity						
Hispanic	16.1%	14.3%	20.3%	16.8%	17.2%	13.8%
White	29.5%	24.1%	38.0%	26.2%	36.0%	28.3%
African American	14.8%	11.9%	19.2%	12.0%	17.9%	13.1%
Other	32.7%	21.2%	25.8%	16.3%	30.4%	21.2%
Age						
18-24	23.7%	18.3%	29.2%	18.3%	28.3%	20.5%
25-34	26.7%	22.0%	33.5%	21.6%	33.3%	25.1%
35-44	27.4%	21.2%	37.2%	22.0%	38.8%	23.3%
45-54	32.9%	22.0%	38.8%	24.6%	38.0%	26.2%
55-64	27.8%	22.5%	35.7%	25.8%	24.2%	26.5%
65-74	23.4%	22.4%	31.7%	26.1%	24.2%	25.5%
75+	13.4%	15.5%	15.7%	15.0%	12.8%	15.0%
Highest level of education						
Grade school	4.5%	3.6%	8.4%	5.9%	6.3%	3.9%
Some high school	7.7%	4.3%	14.0%	8.0%	11.8%	5.0%
High school graduate	14.2%	9.9%	25.7%	16.3%	20.2%	13.3%
Some college	29.2%	19.7%	38.2%	23.6%	36.5%	25.0%
College graduate	46.6%	37.2%	51.9%	32.9%	51.2%	38.4%
Graduate school	38.8%	49.3%	51.9%	36.9%	56.8%	48.8%
Family income						
Less than \$20K		10.2%		12.3%		12.1%
\$20K to \$50K		14.0%		17.9%		16.2%
\$50K to \$75K		22.1%		24.5%		25.3%
\$75K to \$100K		26.5%		28.9%		30.1%
\$100K to \$150K		13.8%		30.5%		38.8%
\$150K and over		43.2%		36.4%		46.6%

Gray shaded box indicates that the estimate is significantly different from the 2012 estimate at the .05 level.

4. The question in 2002 was broader if asked about craft fairs and festivals, not just about craft or visual arts festivals, and thus the 2012 estimate are not directly comparable.

Iyengar 2012, pg. 56

Sample Findings

- The percentage of U.S. adults taking music, creative writing, or visual arts lessons or classes at any point in their lives has increased over the past decade — by more than 15 percent for creative writing and visual arts and 5 percent for music.
- A trend toward greater racial and ethnic diversity of adults taking classes or lessons is evidenced by the higher rates of African Americans and Hispanics taking acting, dance, creative writing, and music appreciation classes in the past year.
- Music is the art form most commonly studied, whether through voice-training or learning to play an instrument.
- Photography or filmmaking is the only art form that more people reported learning through other means other than classes or lessons.
- Women, non-Hispanic whites, and 18- to 24-year-olds represent the demographic profile of adults who are the most likely to have taken music classes or lessons at some point in their lives.
- Nearly half of the nation's adults (46 percent) recalled taking arts classes or lessons as a child, while one-third reported taking classes/lessons as an adult. Music is the art form most commonly studied as a child.
- The most frequent arts learning experience that occurs through adult classes or lessons is art appreciation and art history. Thirteen percent of Americans said they had participated in such learning as adults.
- More than half of all adults were exposed to the arts as a child, either through visiting an art museum or gallery or attending a live music, theater, or dance performance.
- Childhood experience in the arts is significantly associated with educational level obtained in adulthood. Over 70 percent of college graduates said they visited an art museum or gallery as a child, compared with 42 percent of adults who have only a high school diploma.

Appendix 25: Circuit 2016a-b



Connecting young people and galleries to spark change



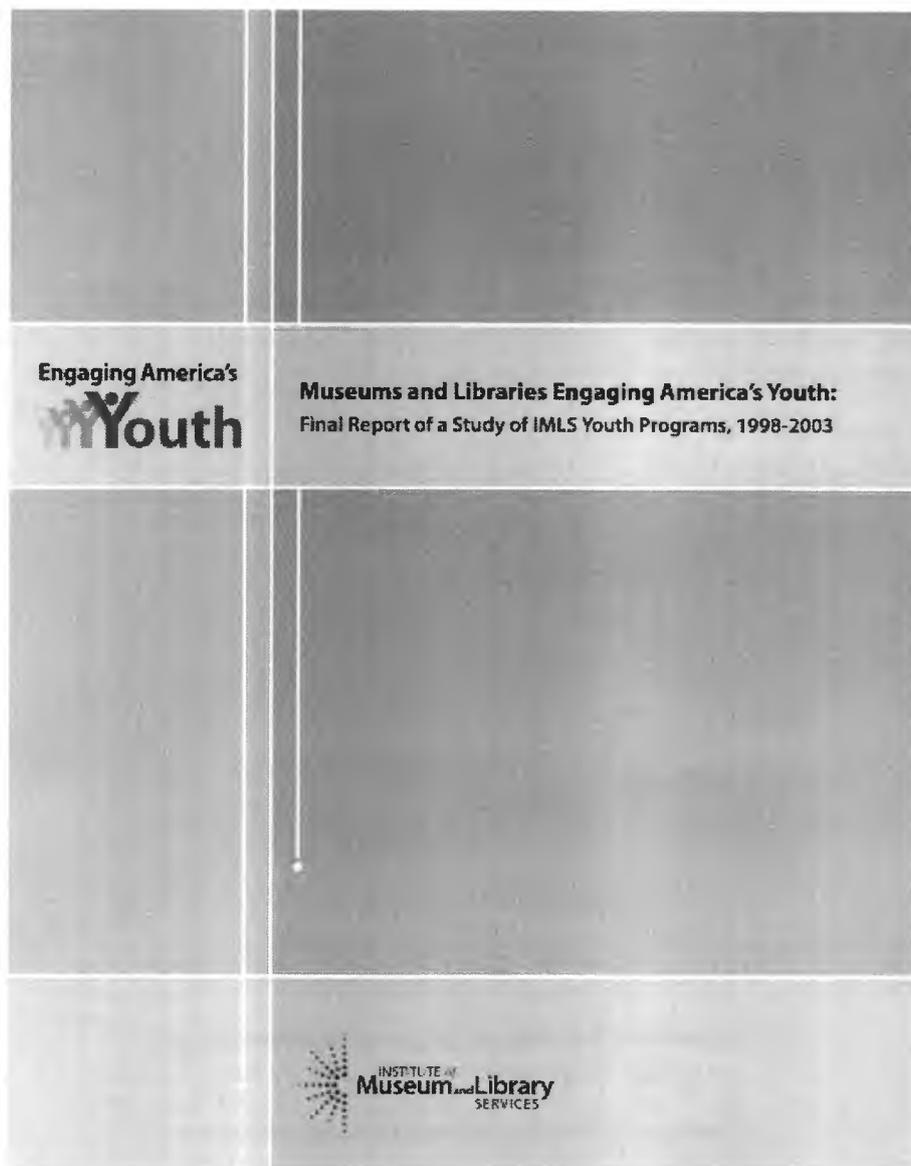
Connecting young people and galleries to spark change

Circuit is a four-year national programme connecting 15-25 year olds to the arts in galleries and museums working in partnership with the youth and cultural sector. Led by Tate and funded by the Paul Hamlyn Foundation, it provides opportunities for young people to steer their own learning and create cultural activity across art disciplines.

Appendix 26: MET 2016

The screenshot shows the top navigation bar of The Met website with the logo on the left and links for MYMET, SETA, SEARCH, Visit, Exhibitions, Events, Art, Learn, Join and Give, and Shop. Below the navigation is a large black and white photograph of a group of people, including a young woman in the foreground looking intently at something off-camera. A sidebar on the left contains a menu with the following items: Kids & Families, Teens (highlighted), Adults, University Students and Faculty, Educators, and Visitors with Disabilities. The main content area is titled 'Teens' and includes a sub-header 'Teens Programs'. Below this is a small image of two young women, followed by a paragraph: 'The Met is the place to be for teens. Check out [classes, workshops, and special events](#) designed especially for teens to develop their skills, and connect with art, visit, and other young people.' At the bottom, there is a section titled 'Teen Blog' with a small image of a group of people sitting at a table, possibly in a classroom or workshop setting.

Appendix 27: Koke and Dierking 2007, Cover Page



Koke and Dierking 2007, pg. 8

Executive Summary

Background

The Institute of Museum and Library Services helps museums and libraries preserve our cultural heritage, enhance learning and innovation, and develop staff capacities to provide the best in service to our communities. *Museums and Libraries Engaging America's Youth* looks at the contributions of IMLS grants from 1998 through 2003 to quality programs and positive outcomes for youth aged 9–19, with four key goals:

- Identify results, trends, and characteristics of these projects.
- Help strengthen programs and community partnerships for youth development.
- Offer models of excellence and practical guidelines for youth programs.
- Understand IMLS projects in a national context of youth development efforts.

The study started with a widely used framework called Positive Youth Development (PYD) (Lerner et al. 2005). The model highlights the internal assets we want for youth—commitment to learning, positive values, social competencies, and positive identity—and the environmental and program features that support and empower youth to develop the assets they need.

An action committee of 15 researchers, educators, funders, policymakers, and practitioners contributed their insight, and 247 IMLS museum and library youth development grantees responded to an extensive survey of project characteristics and goals. Follow-up interviews and two convenings created 15 enlightening case studies that represent the range of geography, disciplines, and sizes of these projects.

Key Findings

Museums and libraries bring unique assets to youth development. They include dedicated, knowledgeable staff; authentic objects, artifacts, and information resources; opportunities for personalized, hands-on learning; support for cognitive and social development; and experiences to help parents, families, and caregivers make learning fun and rewarding.

Youth programs work best when they are integral to an institution's mission, with support from staff and leadership; they are most successful in a "web" of community programs.

The most effective youth programs

- include long-term, trusting, supportive relationships between and among youth, staff, and other adults;
- include staff trained to work with participants in their target age groups or train staff to do so;
- partner with community-based organizations and other cultural institutions;

Koke and Dierking 2007, pg. 9

- use an approach supported by the youth development research literature;
- identify and cover gaps in the web of local youth programs;
- identify appropriate outcomes;
- employ, publicly recognize, and/or include other incentives for participants' accomplishments;
- substantively involve youth in program design and decision making;
- include work or service learning that's meaningful to participants;
- build connections to participants' families and communities; and
- regularly assess or evaluate and use what's learned to improve the program and strengthen other youth development efforts.

Sustainable programs

- build community awareness of project impacts on participants and their community;
- partner with community organizations, groups, and businesses;
- incorporate new sources of funding as programs evolve; and
- ensure continuity of program staff and leadership.

Key observations of this study include the following:

Programs should strongly align institutional focus *and* audience needs, especially by performing needs assessments to inform program selection or design.

Programs should recognize diversity within the category "youth", recognizing audience segments with specific characteristics and needs.

Programs for small numbers may have the greatest impact. Positive youth development literature shows that the greatest gains are often made in programs that serve small numbers of youth intensely.

Programs with extended participation may create the greatest benefit: frequent, in-depth program participation leads to the most substantial benefit for youth.

Programs should expand their strength as community learning environments, and strive for the characteristics recommended by McLaughlin (2000) of being youth-knowledge, assessment- and community-centered.

Programs should strengthen the role of youth beyond that of audience, bringing youth into decision-making at all stages.

Programs need strategies to extend their life cycles: by broadcasting their programs' importance and success to the larger community, they could leverage their ability to develop new partnerships and find longer-term funding.

Koke and Dierking 2007, pg. 12

- Youth (aged 9–19): This is the age group that has gained national attention through initiatives such as Helping America's Youth and the group whose needs are distinct from those of early childhood.
- Four main grant programs that served youth were included in the study: National Leadership Grants, Learning Opportunities Grants, Native American Library Services, and State Library Program Grants.
- Grants awarded between 1998 and 2003 (grants for which results and final reports were available).
- Programs that served youth either directly or indirectly; that is, programs that focused on development of skills, knowledge, or behaviors in youth themselves, or programs that developed resources—such as curricula, exhibits, or Web sites—or that provided training for people who serve youth.

IMLS identified approximately 450 programs that appeared to satisfy these criteria.

IMLS was particularly interested in knowing more about programs that partnered, were ongoing, showed community impact, used a written framework, and conducted an evaluation.

Fifteen case studies exhibiting effective practice were selected from among the projects surveyed. The selected projects were representative of geography, size, and type of institution. A diverse action committee of researchers, educators, funders, policymakers, and practitioners was assembled and invited to meet with two representatives from each case study project at two separate meetings hosted by IMLS. At these meetings, action committee members contributed a broad, national perspective, as well as expertise and commentary from the particular community that each represented. As each case study was discussed and major themes related to effective practice identified, they contributed vital insights (see Appendix B).

This final report summarizes the purpose of the initiative study, provides an overview of relevant literature, describes the methods used (in particular, the development of the questionnaire and the selection of case studies), and presents major findings, implications, and overall conclusions. To be clear, the results drawn are representative of the programs IMLS funded in the designated time period and are not necessarily representative of the museum and library fields broadly. The action committee helped review this report and develop a strategy for disseminating the results.

Koke and Dierking 2007, pg. 13

Section One: Relevant Literature

Positive Youth Development

Empirical research demonstrates that community programs can help youth develop various personal and social assets related to their physical, intellectual, emotional, and social development that are critical for a successful transition into adulthood (Eccles and Gootman 2002, Lerner et al. 2005; McLaughlin 2000; Scales and Leffert 1999). This arena of youth development research—referred to by the National Collaboration for Youth Members in 1998 as the Positive Youth Development (PYD) approach—is a process that prepares youth to meet the challenges of adolescence and adulthood through a coordinated, progressive series of activities and experiences that help them become socially, morally, emotionally, physically, and cognitively competent. Positive youth development addresses the broader developmental needs of youth, in contrast to traditional deficit-based models, which focus solely on youth problems, such as substance abuse, conduct disorders, delinquent and antisocial behavior, academic failure, and teenage pregnancy (De Leon and Ziegenfuss 1986; Friedman and Beschner 1985; Gold and Mann 1984).

PYD marked an important change in approach in terms of how to help youth become productive and thriving adults. Traditional deficit-based efforts focused on responding to crises, such as reducing juvenile crime or trying to transform poor behavior and character in youth (Catalano et al. 2004; Kelley 2003; Weissberg and Greenberg 1997). The PYD field adopted a broader focus to understand the developmental precursors of both positive and negative youth development, with practitioners and the policy community calling for expanding programs and interventions that increasingly involved several social domains (schools, families, peer groups, and others). This coordinated approach has been recognized in forums on youth development, including practitioners, policymakers (Morrissey and Werner-Wilson 2005; Pittman 1991; Pittman and Fleming 1991; Pittman, O'Brien, and Kimball 1993), and prevention scientists (Eccles and Gootman 2002; Weissberg and Greenberg 1997) who have advocated that models of healthy development can hold the key to health promotion and the prevention of problem behaviors.

A more recent framework created by developmental psychologists describes five characteristics observed in positively developing young people, and which successful youth programs foster. They are referred to as the Five Cs: cognitive and behavioral *competence* and *confidence*, positive social *connections*, *character*, and *caring* (or compassion). Lerner and colleagues (2005) theorized that when young people manifest these five Cs across their development, they can be described as thriving. In addition, it has been suggested that such exemplary positive youth development results in the emergence of a sixth C—*contribution*—to self, family, community, and ultimately to civil society (King et al. 2005).

In addition to identifying positive youth characteristics, the PYD field, based on McLaughlin's work with youth in urban settings, has also developed four characteristics

Appendix 28: Adventure Science Center (ASC) 2016a



Adventure Science Center (ASC) 2016b



Adventure Science Center (ASC) 2016c



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Adventure Science Center (ASC) 2016d



Receive self-satisfaction from knowing your help is appreciated

Volunteer positions include:

Discovery Docent - Discovery Docents are trained by ASC science educators to add value to our guests' experiences by presenting Discovery Cart programs or by facilitating the use of exhibits throughout the science center. These programs add information and excitement to our guests' visit and take the experience to the next level of education and fun.

Public Programs - Bring science to life for visitors with simple, fun science demonstrations.

Phone Operator - Answer basic questions and directing calls appropriately.

Guest Services - Greet guests, answer questions and encourage visitors to become members.

Birthday Party - Assist with preparations and execution of on-site birthday parties.

School Orientation - Greet school groups, explain center rules and escort groups to their programs!

Special Events - Help with any of our many special public events in a wide variety of roles.

Fundraising/Development - Assist in the planning or execution of fundraising events and other activities.

Administration - Go behind the scenes and help with the daily office functions of ASC.

Tinkering Garage:

Do you love making things, tinkering with objects, building with mechanical parts, or experimenting with electronics? How about sharing your passion for making things with others? Adventure Science Center seeks creative volunteers to assist inside a temporary exhibit, the *Tinkering Garage*, opening Feb. 13. The *Tinkering Garage* aims to inspire visitors of all ages to make - using their hands, provided tools, and imaginations!

Volunteers will assist ASC staff with open-ended maker activities with the public, school groups, members and campers inside the *Garage*. Additional duties include guest greeting, managing crowd control, assisting with safety rule enforcement and more! Creative, outgoing, and enthusiastic individuals that like sharing with others are well suited for this position. We ask that volunteers be available Saturdays or Sundays and on occasional weekdays.



Adventure Science Center (ASC) 2016e



Adventure Tower

The *Adventure Tower* at Adventure Science Center is packed with exciting scientific exploration! Lift a car without breaking a sweat. Crawl through a beating heart. Then climb through the roof inside the *Adventure Tower's* giant glass pyramid for a spectacular view of the Nashville skyline.

Beekeeping

Journey up to the third floor where you can watch as hundreds of bees travel in and out of the colony and perform a variety of jobs, including feeding young bees, collecting pollen and nectar, and making honey.

Blue Max

Sharp banks, sky loops and screaming dives await you as you maneuver your very own jet aircraft through the wild blue yonder. *BLUE MAX* lets you be the pilot, gunner or both as you engage in interactive dog fighting, carrier landings, flight training, and aerobatic maneuvers.

BodyQuest

BodyQuest presents a day in the life of your body. See what goes on inside you every day, how your body systems work together and how hard your body works to try to keep itself in good working order.

Mission: Possible

See how science and medicine team up to enable people with disabilities in this uniquely interactive experience featuring obstacles that everyday life presents for people with disabilities - and the machines of rehabilitative medicine designed to overcome them.

Nano

Nano is an engaging exhibition about nanoscale science, technology, and engineering (nano). Join us to imagine and discover the nanoscale world - a world so tiny it's too small to see! This exhibition includes hands-on, interactive exhibits that invite exploration of nano phenomena and real world applications and implications.

Space Chase

Go for a moonwalk, experiment with rocket launches, visit the planets of our solar system and more in this two-story exhibit wing dedicated to the wonders of space and the technology we use to explore the universe.

Adventure Science Center (ASC) 2016f

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Special Events

4th of July

Join the Adventure Science Center in celebrating the 4th of July with an unobstructed view of Nashville's downtown fireworks – from the rooftop or lawn.

Nashville Mini Maker Faire

The *Nashville Mini Maker Faire* is like a big science fair or a community “show & tell” where people will demonstrate their do-it-yourself skills and showcase a wide variety of projects.

Whistlestop Weekend

The *All Aboard for Trains!* exhibit is a model train extravaganza heralding the beginning of the holidays and delighting young and old with a dizzying array of magical model railroads.

The 12 Days of Science

Join the merriment with a full lineup of seasonal programs and activities for the entire family. All activities take place from 10 a.m. to 3 p.m., unless otherwise noted.

Adventure Science Center (ASC) 2016g

Adults

Sudekum Planetarium

Travel to the outer reaches of the universe in the Sudekum Planetarium! Check our schedule for showtimes and tickets.

Science Cafe

Adventure Science Center invites you to join us for a series of informal discussions on current issues in science. Whether tackling how science can solve global problems or help us to understand how the universe works, these gatherings are NOT lectures. They are an opportunity for you to share your opinions, ideas and thoughts with other science lovers and to meet local scientists in a fun, casual setting.

Science of Beer (21)

Join us for an annual celebration of craft beer and science, as you sample brews from a wide array of regional breweries from across the nation. Don't miss this unique beer festival, where 100% of proceeds directly support Adventure Science Center.

Way Late Play Date (21)

Every few months we open our doors from 6:30 to 10 p.m. to adults-only for a night of science and fun. Each Way Late Play Date has a special theme with cool science activities to take part in. Plus, you'll have all the floor exhibits to yourself, including the laser game Body Battles in BodyQuest, the Tilt a World in Space Chase and the many levels of the Adventure Tower. All the center's exhibits are adult-friendly, so if the kids can climb it or slide down it, SO CAN YOU!

Adventure Science Center (ASC) 2016h

Adventure Science Center and Lipman Brothers present the
7th Annual Science of Beer



Thursday, Dec. 17, 2015 | 7 - 10 p.m.

The Science of Beer is an annual festival that celebrates local and American craft beer featuring tastings of over 70 brews, fun beer-science demonstrations and activities, liquid nitrogen beer ice cream and more. This one-of-a-kind beer festival happens to coincide with the much anticipated release of the 7th Star Wars movie. So journey with us to the outer reaches of space...

A long time ago in a brewery far, far away... Luke Sky-Porter, Princess Lager and Han SoBro joined forces to craft the best beer and conquer the Galactic Amber-pire of Emperor Pale-Ale-patine and Darth Kegerator.

Ticket Prices:

All ticket levels include unlimited tasting samples of more than 70 craft beers and a commemorative pint glass.
Patron-level ticket includes a full pint at the Beer Garden.

Basic	Patron (member)	Patron (non-member)
\$45	\$45	\$55

Adventure Science Center (ASC) 2016i

Way Late Play Date (21+)



Thursday, April 28 | 6:30 to 10 p.m.

The apocalypse has hit Nashville - and YOU are among the survivors. Whether you're fighting off hordes of zombies, living in a totalitarian state, or coping with the fallout of nuclear war, life after the apocalypse is tough. But there's no need to fear... we're prepared to teach you the skills you need to survive during these extreme times.

Tickets are \$20 for members, \$30 for non-members, and include admission to all exhibits and activities, three beverage tickets, a planetarium show and souvenir cup.

[PURCHASE TICKET](#)

Activities (Included with admission):

- Education activities: TBA
- Costume contest (prizes include tickets to future Way Late Play Dates)

Adventure Science Center (ASC) 2016j

SCIENCE



Adventure Science Center invites you to join us for a series of informal discussions on current issues in science. Whether tackling how science can solve global problems or help us to understand how the universe works, these gatherings are NOT lectures. They are an opportunity for you to share your opinions, ideas and thoughts with other science lovers and to meet local scientists in a fun, casual setting. So grab a cup of coffee and let's chat! All Science Café events are free and open to the public on most third Thursdays of each month from 6:30 to 7:30 p.m. at Adventure Science Center.

Join our Science Café Meetup Group! You'll get notices about each month's meeting topic and speaker(s).

Next Science Café:

Wednesday, March 30 | Time: TBA

Telescope Screening + Discussion

Do you want to learn more about NASA's James Webb Space Telescope (JWST)? Join us for a very special Science Café where we will screen *Telescope* in the Sudekum Planetarium. *Telescope* is a documentary about NASA's yet-to-launch JWST that shows viewers how the telescope was built, and explores the questions of where humans came from and how the universe arose.

Immediately following the screening, we will host a discussion on the James Webb Space Telescope with speaker(s) involved with the *Telescope* project. Stay tuned for more info!

[Learn more about *Telescope*](#)

Adventure Science Center (ASC) 2016k



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Homeschool & Family Science Labs

Adventure Science Center strives to provide families with opportunities to explore science in unique and fun ways. Our mission is to create science experiences that increase interest in science, technology, engineering, and math (STEM).

COME WITH YOUR HOME SCHOOL GROUP

Design your own field trip with a Family Science Lab!

Home school organizations or educational **groups with 15 or more students** may book any school programs offered in our program catalogue including demonstrations, presentations, labs and planetarium shows. Age level ranges are listed in the program selections. Field trips require one single payment for the whole group and may include advance deposits. Contact the Reservations at (615) 862-5177 to schedule. **One week advance scheduling required.** For more information about this option, go to the field trips section of the website.



COME AS A FAMILY

We believe the best way to teach science is to experience science. Family Science Labs provide parent/student hands-on science experiences, where one parent and one or more children form a team to explore science stations and observe demonstrations built around common science topics such as chemical reactions, life science topics, technology, and much more. This opportunity is designed for adults and children to explore science together by questioning, following directions, recording data, and proposing explanations.

Please note: We offer a range of grades for labs so that families may work together. An adult must be with the student. Adults and students each pay the fee to be in the lab. For questions about lab content call (615) 401-5082 or email ggibson@adventuresci.org.

FAMILY SCIENCE LABS

All programs start at 2 p.m. and are appropriate for 4th - 8th grade students. Labs run approximately one hour.

Adventure Science Center (ASC) 2016I



ScienceQuest Camps

ScienceQuest Camp at Adventure Science Center provides a wide range of science enrichment programs for youth in grades K-9. Programs combine science, technology, engineering and math in ways that encourage kids to actively discover and examine concepts for themselves. We inspire a life-long passion for learning and teach kids creative problem-solving skills, teamwork, persistence and follow-through in a fun learning environment.

Early Explorers

Introduce your preschooler to the wonders of science before the Science Center opens to the general public! On select Mondays[®], Early Explorers can enjoy all the exhibits, see a special preschool planetarium show, and attend story time with our staff.

Homeschool & Family Science Labs

Homeschool & Family Science Labs are parent/student hands-on science experiences. One parent and one or more children form a team to explore science stations and observe demonstrations built around common science topics such as chemical reactions, life science topics, technology and much more.

Little Labs

You and your young scientist (age 3-5) are invited to participate in age-appropriate lab activities, science craft, a movement activity and story time—all designed to strengthen emerging skills and ignite curiosity in young minds.

Sudokum Planetarium

Travel to the outer reaches of the universe in the Sudokum Planetarium! Check our schedule for showtimes and tickets.

TWISTER

TWISTER (Tennessee Women in Science Technology, Engineering & Research) aims to inform high school aged young women about possible science, technology, engineering and math (STEM) career paths, by providing opportunities for participants to connect with positive female role models working in STEM fields and to engage in hands-on, real-life STEM activities.

Scouts

Adventure Science Center believes in inspiring young members of the community by facilitating the learning of science through dynamic leadership. We have many uniquely planned activities for Scouts, including camp-ins and badge workshops.

Sleepovers

Experience the ultimate exploration of science with an all-night sleepover, or create your own private adventure with an Almost Overnight event.

Star Parties

Star parties are a great way to become acquainted with the real night sky. At least once a month, astronomy enthusiasts from across Middle Tennessee gather under a clear night sky to set up their telescopes and share the astronomical sights above. To minimize the effects of light pollution, star parties are usually held at local parks away from downtown.

Youth CR3W

When the Adventure Science Center decided to revive a decades-old youth development program, nobody had any idea how big an impact it would have on everyone involved. Youth CR3W participants' primary responsibilities include interpreting exhibits for guests and facilitating public events. Students apply as high school freshmen, committing to the program for four years.

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Sponsorship Opportunities

Sponsorship Opportunities

Sponsorships offer companies visibility in the community and the opportunity to attach their name to one of Adventure Science Center's high-profile events, award winning exhibits or engaging community activities.

We invite you to visit Adventure Science Center for a private tour and to discuss how our Sponsorship program will benefit your company. With so many programs, activities and exhibits offered to the Middle Tennessee community, we are confident there is the perfect partnership to be built between your company and Adventure Science Center.

If interested in scheduling a meeting, please contact our Corporate Partner representative:

Timothy Sears
Development Manager
(615) 401-5055
tsears@adventuresci.org

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Tinkering Garage

Open daily: 11 a.m. to 4:30 p.m.

Please note: Last entry into the Tinkering Garage is 4 p.m.

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Dynamo Club

Dynamo Club

(Formerly Science Explorers Club)

Join the club! Adventure Science Center invites young scientists ages 12-14 to participate in a new program where they can go in-depth with exciting science concepts and meet new friends.

Classes begin promptly at 3 p.m. and are 2 hours in length.



TERM 4 - Young Chemist

Dynamo Club provides a hands-on, mind-on set of activities and lessons that reinforce and teach STEM concepts in an engaging and concrete manner. Participants will delve into the field of chemistry focusing on matter (atoms and compounds), the scientific method, lab procedures, chemical reactions and physical reactions. The *Young Chemist* term will provide students with a unique opportunity to experience chemistry beyond the classroom.

Adventure Science Center (ASC) 2016p



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Science for Girls / TWISTER

Adventure Science Center Presents the 14th Annual



TWISTER
Tennessee Women in Science, Technology, Engineering & Research

STEM Conference for Girls in 9th to 12th Grade
Saturday, February 13 | 8 a.m. to 3 p.m.

Saturday, Feb. 13 | 8 a.m. to 3 p.m.

TWISTER (Tennessee Women in Science, Technology, Engineering & Research) is a daylong professional conference for high school girls, presented by women working in STEM (Science, Technology, Engineering and Research) professions. Each presenter is eager to share details about her career with you, answer your questions, help steer you to the right educational pathway, and give you a little taste of daily life in the workplace. Participants attend four, 55-minute sessions that explore a variety of STEM topics.

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CR3W

AT ADVENTURE SCIENCE CENTER

More than just another extracurricular, Youth CR3W is a program that prepares Nashville teens for college and the working world. Students are encouraged to apply as high school freshmen, committing to the program for four years. Pronounced "crew," the "3" in CR3W represents three E's: engage, explore, and explain.

Engage

The primary responsibilities of Youth CR3W include interpreting exhibits for guests and facilitating public events.

Explore

Youth CR3W offers an opportunity to hone communication skills in a professional environment through gaining confidence with public speaking and leadership roles, discovering real-world business skills and etiquette, and developing a solid work ethic. The program allows students to explore their own evolving career interests in a way that has a positive community impact.

Explain

Being able to explain science to a wide range of ages is one of the primary skill sets developed throughout the Youth CR3W program. The sheer enthusiasm of Youth CR3W participants helps guests forge better connections with Science Center exhibits and programs.

Goals

For participants:

- Enhance attitude, skills, knowledge and appreciation for STEM class work and careers
- Increase interest in learning, understanding of specific concepts and inquiry skills
- Develop and refine social skills and valuable life skills
- Develop communication skills that boost self-image and the confidence needed to converse and interact with museum visitors

For Adventure Science Center:

- Increase educational value to schools and the community
- Add vitality to the visitor experience with an enthusiastic and professional on-floor youth presence
- Inform exhibit and program development for the teen audience
- Broaden the Science Center's audience

How to Apply

Youth CR3W applications are accepted from any high school student (rising freshmen through seniors) each September.



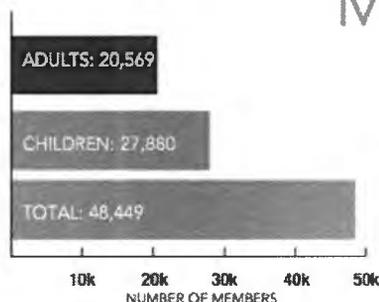
Appendix 29: Krinks 2015, Cover Page



Krinks 2015, pg. 5

MEMBERSHIP

11,244



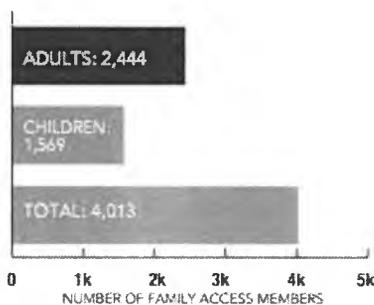
MEMBER HOUSEHOLDS

AVG. HOUSEHOLD SIZE: 4.31

532

FAMILY ACCESS MEMBERSHIPS

AVG. HOUSEHOLD SIZE: 4.59



(discounted membership for economically disadvantaged families)

ADMISSION

234,902

NUMBER OF ADMISSIONS FROM TENNESSEE

TOP 10 VISITOR STATES OUTSIDE TENNESSEE

- | | |
|-------------|-----------------|
| 1) KENTUCKY | 6) OHIO |
| 2) ALABAMA | 7) FLORIDA |
| 3) INDIANA | 8) TEXAS |
| 4) ILLINOIS | 9) MICHIGAN |
| 5) GEORGIA | 10) MISSISSIPPI |



NUMBER OF ADMISSIONS FROM NASHVILLE MSA

Krinks 2015, pg. 6

8

ADVENTURE SCIENCE CENTER:

AN INVESTMENT IN OUR COMMUNITY

**ASC is living its Mission Statement to “ignite curiosity
and inspire the lifelong discovery of science!”**

The Center's program of rotating temporary exhibits provided new opportunities for visitors to learn about health and nutrition with *Good For You: Healthy Fun on the Run*, to understand meteorology with *The Magic School Bus Kicks Up a Storm* and apply problem-solving skills with *Mazes*.

A grant from the **Den and Margaret Maddox Charitable Fund** allowed ASC to continue its **Art2STEM** program for 7th and 8th

grade girls in three Metro Nashville Public Schools. Through ASC's role on the Advisory Committee, we brought together students from Stratford STEM Magnet High School and engineers to present Hands-On Engineering Day for all 8th grade and upcoming 8th grade students.

ASC launched **Youth Cr3w**—a youth development program to motivate student interest in STEM and offer career development

opportunities to young people in the community.

Adventure Science Center was awarded the Certificate of Excellence by TripAdvisor.com as well as Best Place to Take Your Kids When it's Raining by Nashville Scene readers. The Center also consistently ranks among Nashville's top five tourist attractions.



Adventure Science Center...

- works with schools to both train educators and help teach the curriculum.
- offers year-round out-of-school programs.
- provides exciting learning opportunities for all ages.
- provides safe and affordable activities that strengthen families.
- is a destination for tourists and generates valuable income that helps the local economy. Museums and science centers rank among the top three family vacation destinations.

10

PROGRAM HIGHLIGHTS

YOUTH DEVELOPMENT

CR3W EXPLAIN EXPLORE ENGAGE

Thanks to an anonymous donor, Adventure Science Center's Youth Development Program—The CR3W—launched in September as a year-round teen-focused program centered on helping Nashville area youth acquire transferable workplace skills and real-world employment experience through meaningful, purposeful work. While learning to be effective exhibit explorers, demonstrators, assistants and cross-age trainers, teens expand their science knowledge, explore science, and prepare for college and the working world. Starting with ten 9th graders from Metro Nashville Public Schools, the CR3W will add 10 - 12 new recruits annually. Each year of the program the students will gain more responsibility and be given the chance to take on larger leadership roles. The CR3W adds vitality to the visitor experience with an enthusiastic and professional on-floor youth presence while developing communication skills that boost self-image and confidence. Look for members of the CR3W in their colorful, yellow aprons!

SCIENCE FOR EVERYONE

SCIENCE Café

The Science Center may look dark at 7 p.m. on the third Thursday of every month, but inside there is a lively discussion going on. It's a Science Café! These free, open-to-the-public after-hours events focus on a variety of science topics and have become a much anticipated part of ASC's public outreach. Science Cafés bring scientists and science professionals "across the aisle" to face with the general public in a relaxed atmosphere and are anything but lectures! Café topics have included Red Wine and Dark Chocolate in the Brain, the Science of Addiction, and the Science of Laughter. Over 400 adults participate in Science Cafés each year.



ART2STEM

Adventure Science Center completed its fourth year offering out-of-school time Art2STEM clubs for 7th and 8th grade girls. Thanks to generous funding from the Dan and Margaret Maddox Charitable Fund, ASC hosted clubs in three Memphis middle schools. Art2STEM was designed to spark interest and knowledge about STEM-related careers and opportunities for girls who possessed little or no interest in the subjects. The project builds on their interests in art and other, more traditional careers to guide them through carefully planned activities, including business site visits and college tours that create awareness of how these interests intersect with STEM. The result, for the first time, girls can see themselves as valuable contributors to a better tomorrow through new, previously unimagined STEM careers. In FY13, 75 girls participated in this year-long outreach program. A fourth club has been added for next year.

VOLUNTEERS

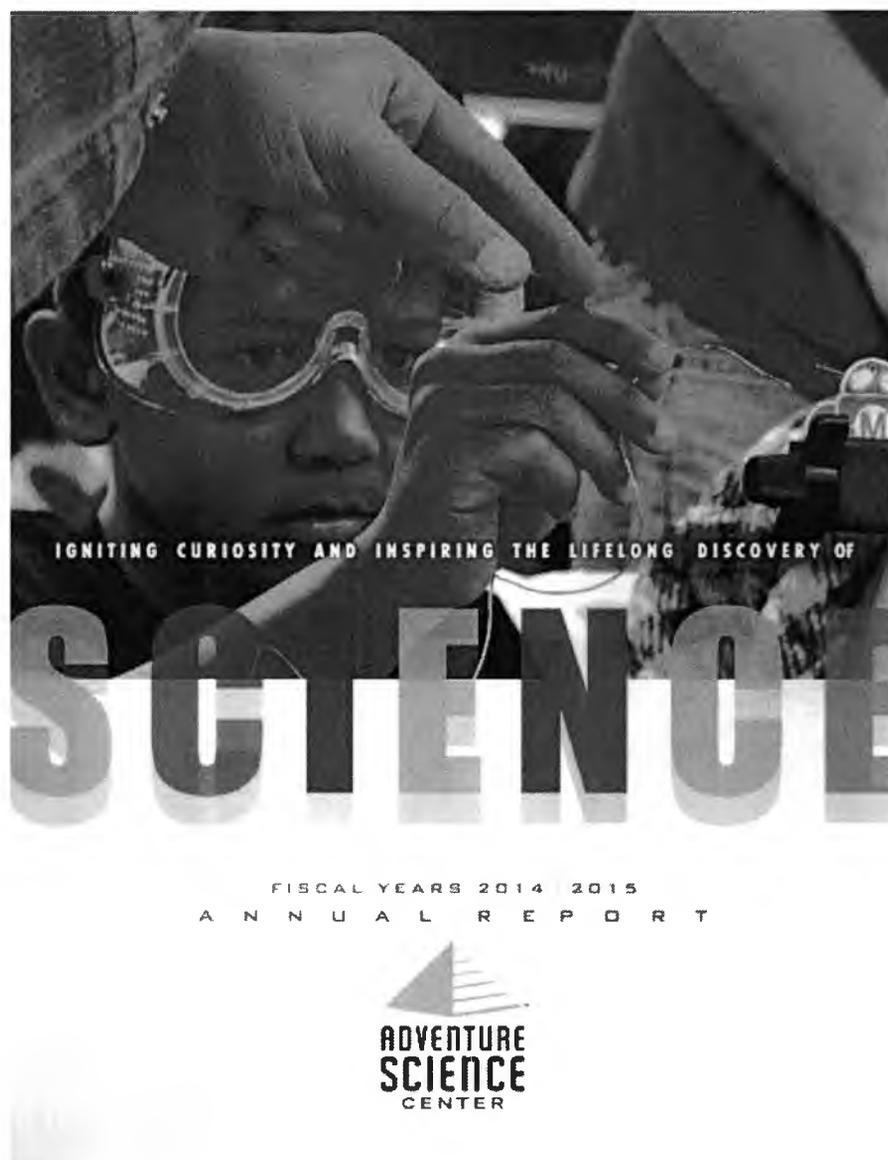
204 volunteers gave 6,313 hours of service for a value of \$138,770 to Adventure Science Center.



100+ Hours	50+ Hours	Interns
American Society of Civil Engineers	Arrow Adolescent	Alysa Allyn
Henry Center*	Caltop Adventure	Jalini Chelbipensak
Boylough Clark*	Joshua Banks	Nicole Cruz
HCA Volunteers	Caroline Crohn	Mary Harch
Jake Hodge*	Dan Volunteers*	Thal Irmal
Rachel Johnson*	Elit Derriner*	Shawnee Kelly
Carl Lawler*	Dawznee Howell	Donna Moore
Vadis Sanchez-Rodriguez	King Lu	Jessica Sobot
Arts Society	Kira Mochal	Bruce Thurmond
Laney High School National Honor Society	Riverview High School National Science Honor Society	
Bauder Manning*	Saba Newman*	
Carlo Obregon*	Chris Snider	
Isabela Pagan*	Samantha Waters	
Vicis Zarygala*		
	-ASC Team Crew	



Appendix 30: Krinks 2016



For 70 years, Adventure Science Center has played a critical role in offering science content that inspires curiosity in all ages. With 44,000 square feet of exhibit space, the Center features nearly 175 hands-on exhibits focused on biology, physics, visual perception, listening, mind, air and space, energy and earth science. We bring science to life with award-winning programs that include daily science demonstrations, activities, workshops, lectures, camps, Science Cafés and other special events. Serving more than 300,000 people annually, Adventure Science Center continues to be a premier attraction and learning center for visitors throughout Middle Tennessee and far beyond.

"Our daughter is taking biology and making 39 on her tests. When she was little she would attend science camps at Adventure Science Center. You have nurtured her interest in science goals!" as we say!
-Zarena C., parent of high schooler, Nashville, TN



Named "Best Place to Take the Kids When It's Raining" in the Nashville Scene's Best of Nashville readers' poll

Educational Programming

"We absolutely loved the Tinkering Garage exhibit! We will definitely be back!"
-Adrian, visitor

SCHOOL CHILDREN SERVED:

131,308 from Tennessee and **6,301** out-of-state school children through on-site labs, demonstrations, after-school and out-of-school programs, camps and overnights, and self-guided activities.

47 Tennessee school systems served

School groups from **14** other states and Japan

Camp attendance: **9,081**

Camp-in participants: **8,424**

Community Outreach: National Libraries "Summer of STEM" collaboration: **4,012**

Out-of-school program attendance: **43,235**

Teen program attendance: **2,083** hours



YOUTH CR3W



We connected 40 teens with science in more meaningful ways through our Youth CR3W program. As part of CR3W, the students have opportunities to develop both their science content knowledge and interpersonal skills through interacting exhibits for guests and facilitating hands-on activities for public events. Students apply to high school freshmen, committing to the program for four years. As the students progress through the program, their responsibilities grow, and they learn valuable skills for college and a future career. CR3W members represent the following high schools: Antioch, Brentwood, Case Ridge, Centennial, Hickory Hollow, Hunter Lane, Monte Luter King Jr., McLawick, Nashville School of the Arts, Overton, Brentwood and University School.



"I love science camp at the Adventure Science Center. I get to play in a car and watch a worm count because they helped me be more interested in science all before I read it and to go to the next summer."
—Audrey, 3rd grader
Rochelle, TN

Photo by Jeff Miller/Photo

PUBLIC EVENTS

Adventure Science Center was a proud recipient of the **Award of Excellence** by the Tennessee Association of Museums for the inaugural Nashville Mini Maker Fests. More than 3,000 people attended the free drop-in event featuring local "makers" — with workshops, vendors, kid-friendly art stations — who demonstrated their do-it-yourself (DIY) projects and inventions in an expansive outdoor festival. From a full-scale replica of the Millennium Falcon to paper and laser-cut metal musical instruments to vehicles and 3D printing, the Fests bring together a concentration of interests with the common theme of science and creativity each year.



Other popular public events included:

Knoxville
 Charge!
 Earth Science Day
 Spooky Science Days
 Workshop Weekend
 The 12 Days of Science
 Hoopie Hoop Year
 Welcome the Fresh Day
 Science of Winter Olympics
 Engineering Day
 Collectors' Day
 National Pi Day

Nashville
 Area Day
 Big Boy's Golf
 Science of Space
 National Access Day
 TM Energy Week
 Green Building
 Earth Day
 May the 4th Be With You
 Space!
 Pow!
 Day Days of Science
 EdibleScience
 Science March

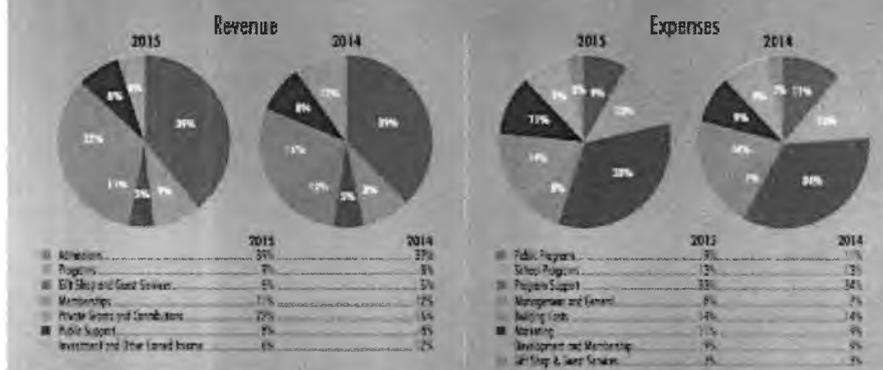
COMMUNITY PARTNERSHIPS

- Algorist Networks
- Austin Peay State University
- Avium Society of Nashville, Tennessee
- Bailey STEM Magnet Middle School
- Belmont University
- Boy Scouts of America
- East State of Nashville, Tennessee
- Eastman
- Eastman Museum Magnet School
- Eastern University
- Knoxville
- Knoxville 21st Century Center
- Knoxville Arts Commission
- Middle Tennessee State University
- Knoxville Ballet
- Knoxville
- Knoxville Public Library
- O2 Nashville
- Robert O. Anderson Museum Magnet Elementary School
- New York STEM Magnet Middle School (NYMS) (Former)
- Skanska STEM Magnet High School (SMACE) (Former)
- Tennessee Engineering Center
- Tennessee State University
- The American Center of Nashville
- Vanderbilt University
- Women in Technology Network
- WREX

536
 volunteers gave **8,966**
 hours of service for
 a value of
\$182,023

■ The **Nashville 360** Scholarship Program provided transportation for 144 students to attend the Nashville Science Center's 2014 Science Festival. A total of 145 students took to the Science Center on 17 bus trips. Most provided by the generosity of the Nashville Museum Foundation and the Adventure Science Center.

STATEMENTS OF OPERATING ACTIVITY (YEARS ENDED JUNE 30, 2015 AND 2014)



Revenue	2015	2014	Expenses	2015	2014
Admissions	1,924,529	1,779,247	Public Programs	452,309	514,212
Programs	452,052	361,354	School Programs	636,289	612,295
Gift Shop and Guest Services	237,004	240,368	Program Support	1,691,684	1,642,420
Memberships	555,205	547,930	Management and General	354,334	373,881
Private Grants and Contributions	1,110,222	743,152	Building Costs	690,062	652,376
Public Support	298,773	359,750	Marketing	527,431	422,471
Investment Income	25,704	274,440	Development and Membership	444,044	448,958
Other Earned Income	258,125	272,752	Gift Shop and Guest Services	159,291	149,211
TOTAL	4,941,614	4,579,876	TOTAL	4,802,438	4,781,325

BALANCE SHEET (YEARS ENDED JUNE 30, 2015 AND 2014)

	2015	2014
Assets		
Cash	1,732,470	1,492,918
Prepaid and Accounts Receivable, Net	138,531	125,259
Investments	1,840,997	1,867,084
Building and Equipment	14,566,387	15,064,588
Other Assets	477,651	424,587
Beneficial Interest in Charitable Remainder Trust	643,036	661,165
TOTAL ASSETS	19,599,046	19,651,667
Liabilities		
Accounts Payable	164,063	125,177
Accrued Expenses	829,639	127,694
Deferred Revenue	157,977	144,850
Notes Payable	1,049,516	1,445,166
TOTAL LIABILITIES	1,597,190	1,642,907
Net Assets		
Unrestricted - Unassigned	14,946,762	14,910,261
Unrestricted - Board Designated Endowment	735,857	1,854,784
Temporarily Restricted	1,259,239	1,067,552
TOTAL NET ASSETS	17,941,856	17,832,597
TOTAL LIABILITIES AND NET ASSETS	19,599,046	19,651,667

Appendix 31: Foundation Directory Online (FDO) 2016a

Grants					
Grantmaker Name [Prev 10 Next 10] • The HCA Foundation (19) • Community Foundation of Middle Tennessee, Inc. (15) • Publix Super Markets Charities (6) • T & T Family Foundation (5) • The Jane and Richard Eskind and Family Foundation (5) • The Steven & Laurie Eskind Family Foundation (5) • Caterpillar Foundation (4) • The Dorothy Cate & Thomas F. Frist Foundation (4) • The Frist Foundation (4) • Alvin and Sally Beaman Foundation (3)	<input type="checkbox"/>	Bank of America Charitable Foundation, Inc., The, NC	Adventure Science Center, Nashville, Tennessee	2007	\$15,000
	<input type="checkbox"/>	Baulch Family Foundation, TCH, FL	Adventure Science Center, Nashville, Tennessee	2011	\$14,000
	<input type="checkbox"/>	Beaman Foundation, Alvin and Sally, TN	Adventure Science Center, Nashville, Tennessee	2004	\$10,000
	<input type="checkbox"/>	Beaman Foundation, Alvin and Sally, TN	Adventure Science Center, Nashville, Tennessee	2010	\$5,000
	<input type="checkbox"/>	Beaman Foundation, Alvin and Sally, TN	Adventure Science Center, Nashville, Tennessee	2011	\$5,000
	<input type="checkbox"/>	Castle Foundation, Harold K. L., HI	Bishop Museum, Honolulu, Hawaii	2008	\$1,700,000
	<input type="checkbox"/>	Caterpillar Foundation, IL	Adventure Science Center, Nashville, Tennessee	2007	\$125,000
	<input type="checkbox"/>	Caterpillar Foundation, IL	Adventure Science Center, Nashville, Tennessee	2009	\$1,000
	<input type="checkbox"/>	Caterpillar Foundation, IL	Adventure Science Center,	2008	\$125,000
	Grantmaker Country [Prev 10 Next 10] • United States (114)				
Grantmaker State/Province [Prev 10 Next 10] • Tennessee (78) • Florida (7) • Illinois (7) • Virginia (6) • California (3) • North Carolina (3)					

Foundation Directory Online (FDO) 2016b-2016c

Grantmaker Name

[Prev 10 | Next 10]

- ⊗ J. Paul Getty Trust (25)
- ⊗ The Capital Group Companies Charitable Foundation (25)
- ⊗ Annenberg Foundation (23)
- ⊗ Jewish Community Foundation of Los Angeles (22)
- ⊗ Suzanne M. Nora Johnson and David G. Johnson Foundation (13)
- ⊗ The Broad Art Foundation (13)
- ⊗ Chartwell Charitable Foundation (11)
- ⊗ Jerry and Terri Kohl Family Foundation (11)
- ⊗ The Bank of America Charitable Foundation, Inc. (11)
- ⊗ Wells Fargo Foundation (11)

Grantmaker Country

[Prev 10 | Next 10]

- ⊗ United States (441)

Grantmaker State/Province

[Prev 10 | Next 10]

- ⊗ California (333)

Grants**Grantmaker Name**

[Prev 10 | Next 10]

- ⊗ Silicon Valley Community Foundation (71)
- ⊗ The San Francisco Foundation (71)
- ⊗ Gordon and Betty Moore Foundation (41)
- ⊗ William K. Bowes, Jr. Foundation (19)
- ⊗ Koret Foundation (17)
- ⊗ Walter and Elise Haas Fund (16)
- ⊗ Stephen Bechtel Fund (15)
- ⊗ Marin Community Foundation (12)
- ⊗ Wells Fargo Foundation (12)
- ⊗ The Bank of America Charitable Foundation, Inc. (10)

Grantmaker Country

[Prev 10 | Next 10]

- ⊗ United States (655)

Grantmaker State/Province

[Prev 10 | Next 10]

- ⊗ California (559)
- ⊗ New York (22)
- ⊗ North Carolina (11)
- ⊗ Arkansas (9)
- ⊗ Arizona (6)

Foundation Directory Online (FDO) 2016d

Grants**Grantmaker Name**

[Prev 10 | Next 10]

- ⊗ The San Francisco Foundation (9)
- ⊗ Silicon Valley Community Foundation (8)
- ⊗ Annenberg Foundation (3)
- ⊗ The Christensen Fund (2)
- ⊗ AT&T Foundation (1)
- ⊗ Hellman Foundation (1)
- ⊗ Robert and Ruth Halperin Foundation (1)
- ⊗ S.D. Bechtel, Jr. Foundation (1)
- ⊗ The Brown Foundation, Inc. (1)
- ⊗ The East Bay Community Foundation (1)

Grantmaker Country

[Prev 10 | Next 10]

- ⊗ United States (33)

Grantmaker State/Province

[Prev 10 | Next 10]

- ⊗ California (30)
- ⊗ Texas (2)
- ⊗ Minnesota (1)

Recipient Name

Appendix 32: HCA Foundation 2014



Our strategy is to Serve, Lead, and Support.

About

About The HCA Foundation

Above all else, HCA is committed to the care and improvement of human life. Caring for patients is only part of what we do at HCA. As the philanthropic arm of HCA, the mission of The HCA Foundation is to promote health and well being, support childhood and youth development, foster the arts in Middle Tennessee and support employees in need nationally through the HCA Hope Fund. In partnership with the employees of HCA, we work to accomplish this mission by providing leadership, service and financial support to effective non-profit organizations.

2014 Annual Community Update

The HCA Foundation and HCA Corporate Sponsorship Annual Community Update was held on Wednesday, December 3, 2014, at the Frist Center for the Visual Arts. Grants and sponsorship information, including our breakdown of giving for 2014 and plans for giving in 2015, was presented.

The keynote speaker for 2014 was Kyle Peterson, Managing Director of FSG, who presented "Collective Impact 2.0: New Insights and Learning." A recording of the Annual Community Update and copies of the presentations are available below.

- The HCA Foundation and Corporate Sponsorship Annual Community Update
- "Collective Impact 2.0: New Insights and Learning"
- Watch the Annual Community Update

Serve

At HCA, caregiving is in our DNA, so it's only natural that our employees would be involved in caring for our local community. Each year, HCA employees generously give their time and money to help our friends and neighbors in need. [Click here](#) to find out more about how HCA employees give and volunteer. And, meet the winners of our outstanding service awards.

Lead

The HCA Foundation emphasizes board member education and nonprofit capacity building. Stronger leaders create stronger programs and through them, healthier communities are realized. [Click here](#) to find out more about our commitment to Board Leadership. Learn about our key capacity building initiatives [here](#).

Support

The HCA Foundation seeks to fund organizations engaged in activities that promote health and well being, support childhood and youth development and foster the arts in Middle Tennessee. [Click Support](#) to find out more about HCA Foundation grants.

Latest tweets

RT @CFMT: Great job everyone! Keep on going! #BigPayback
<https://t.co/ukjpe19vXA>

5 days ago via Twitter Web Client

RT @CFMT: @CFMT's Ellen Lehman & @WSMV More at Midday chat #BigPayback; kicking off at midnight!
<https://t.co/B2MdnEhN0P>
<https://t.co/mebh...>

6 days ago via Twitter Web Client

RT @stokedproject: Teams from @HCAFoundation learning how to apply design thinking to their amazing world! #Nashville #designthinking <https://t.co/...>

6 days ago via Hootsuite

[Follow @HCAFoundation](#)

Appendix 33: Community Foundation of Middle Tennessee 2016

The Community Foundation OF MIDDLE TENNESSEE

GIVE REQUEST EXPLORE ATTEND CONTACT US DONATE

About Us Who We Serve Our Story Community Initiatives Our Affiliates In the News FAQ Social Media



Learn About Us

Explore everything The Community Foundation of Middle Tennessee has to offer.

Learn about The Community Foundation's story, our mission and why the bee is our mascot. Meet our staff, see who we serve and check out our affiliates and community initiatives.

HOME > EXPLORE > ABOUT US > MISSION AND VISION

SHARE THIS PAGE

Mission and Vision

The Community Foundation's mission is to enrich the quality of life in Middle Tennessee.

- We provide flexible and cost-effective ways for civic-minded individuals, families and companies to contribute to their community – now and for all time.
- Our vision is to help people feel good about giving, no matter the amount, no matter the cause.
- We ensure both the excellent stewardship of donor funds and the wise investment of grants in the 40 counties of Middle Tennessee we serve.
- We draw on the deep roots of philanthropy, and we're focused on helping people find creative and even entrepreneurial ways to help the community thrive.

Read this message from Ellen Lehman, The Community Foundation's president and founder. Contact us to talk about ways we could work together to improve our community.

- ABOUT US
- Mission and Vision
- About the Bee
- How Grantmaking Works
- Our Financials
- Board of Directors
- Staff
- Speakers Bureau
- Our Donors

Appendix 34: Publix Charities 2016



[ABOUT US](#) [LATEST NEWS](#)

ABOUT US



OUR MISSION

Our mission at Publix Super Markets Charities is to endeavor to meet the needs of the people in our community. To that end, we commit to be dedicated to the dignity and value of the human spirit—helping strengthen it to overcome adversity, determined to offer people hope and a choice for the future, and devoted to the highest standards of community involvement as demonstrated by our founder George W. Jenkins.

[ABOUT PUBLIX SUPER MARKETS CHARITIES](#)

[SERVING THE SOUTHEAST](#)

Appendix 35: Young Leaders Council 2016



About

Mission

The Mission of the Young Leaders Council is to train diverse, committed individuals to effectively participate on the boards of nonprofit organizations and make a difference in the community by replenishing the volunteer leadership base.

History

YLC is a program founded by the Council of Community Services, in conjunction with the Frist Foundation (formerly the HCA Foundation) and the United Way. It was created in 1985 to address the need to broaden and strengthen Nashville's volunteer leadership base.

Program Overview

The YLC consists of a eleven-session training program, addressing fundamental board skills. These interactive sessions reflect on such leadership indicators as collaboration, diversity and the role of catalyst deemed crucial for today's nonprofit leadership roles. The training is followed by a year internship with a community agency. At this time, the YLC participant serves as a non-voting member of a working board.

Participants

Participants are between 25 and 40 years of age and come from a broad range of corporate, civic and volunteer backgrounds. They may be nominated by YLC alumni, their group's management or may be self-nominated with management's recommendation.

The *YLC Alumni Group* makes activities available to those who wish to continue their involvement.

Appendix 36: Ross 2015

NASHVILLE REGIONAL PROFILE

Published by the Nashville Area Chamber of Commerce



NASHVILLE: Strategically located in the heart of the Tennessee Valley, the Nashville region is where businesses thrive and the creative spirit resonates across industries and communities. The Nashville MSA has 14 counties and a population of nearly 1.8 million, making it the largest metropolitan area in a five-state region. Many corporate headquarters call Nashville home, including Nissan North America, Bridgestone Americas, Dollar General, Honda Corporation of America and Gibson Guitars.

A national hub for the creative class, Nashville has the strongest concentration of the music industry in America. The Nashville region's educated workforce not only provides an abundant talent pool for companies, but also bolsters the region's vibrant artistic and musical essence and competitive edge in technology and innovation. The Nashville region is defined by a diverse economy, low costs of living and doing business, a creative culture and a well-educated population. Cultural diversity, unique neighborhoods, a variety of industries and a thriving entrepreneurial community makes Middle Tennessee among the nation's best locations for relocating, expanding and starting companies.



50% OF THE U.S. POPULATION (150 MILLION PEOPLE) LIVES WITHIN 650 MILES OF NASHVILLE.

40 MILLION PEOPLE LIVE WITHIN 300 MILES OF NASHVILLE.

More than 137,000 students attend the Nashville region's higher education institutions.

More than 17,000 students graduate from Nashville-area colleges annually, with 10,000 choosing to remain in the Nashville region.

HIGHER EDUCATION		
Accredited Four-Year & Postgraduate	Location	Enrolled in 2013
Aquinas College	Nashville	574
Austin Peay State University	Clarksville	10,339
Belmont University	Nashville	8,915
Cumberland University	Lebanon	1,591
Fisk University	Nashville	546
Lipscomb University	Nashville	4,580
Meharry Medical College	Nashville	801
Middle Tennessee State University	Murfreesboro	23,661
Nashville School of Law	Nashville	540
Tennessee State University	Nashville	8,883
Tennessee Technological University	Cookeville	11,118
Trovecca Nazarene University	Nashville	2,406
University of the South	Shawnee	1,701
University of Tennessee Space Institute	Tullahoma	100
Vanderbilt University	Nashville	12,767
Accredited Two-Year Institutions & Tech Schools		
Columbia State Community College	Columbia	5,225
Molloy State Community College	Lynchburg	4,900
Nashville State Community College	Nashville	10,007
Volunteer State Community College	Gallatin	8,153
Tennessee College of Applied Technology	Nashville	1,014
Tennessee College of Applied Technology	Dickson	481
Tennessee College of Applied Technology	Murfreesboro	335
TOTAL ENROLLED		117,292

Source: National Center for Education Statistics, 2013

Appendix 37: Forbes 2016

Forbes The Best Places For Business And Careers

The Little Black Book of Billionaire Secrets

Go from chaos to control

New Strategy Beyond Markets Program Apply now to secure your spot.



- Share
- Tweet
- Share
- reddit
- G+
- Submit



Expand Map →

Map legend:

- Place
- Person
- Company
- College/University
- Sports Team

Nashville, TN

Nashville-Davidson--Murfreesboro--Franklin, TN Metropolitan Statistical Area

At a Glance

Metro Population: **1,795,500**

Major Industries: **Tourism, Health care, Education**

Gross Metro Product: **\$97.7 B**

Median Household Income: **\$53,463**

Median Home Price: **\$172,100**

Unemployment: **5.1%**

Job Growth (2014): **3.6%**

Cost of Living: **3.3% above nat'l avg**

College Attainment: **32.3%**

Net Migration (2014): **4,790**

Forbes Lists

#28 Best Places for Business and Careers

#100 in Cost of Doing Business

#6 in Job Growth

#66 in Education

Profile

Nashville is most notably known as the center of the music industry, earning it the nickname Music City. Nashville is also a center for the health care, banking and transportation industries and is home to a large number of colleges and universities led by Vanderbilt University. The city has a vibrant music and entertainment scene spanning a variety of genres. The Country Music Hall of Fame and Museum, Belcourt Theatre, Ryman Auditorium, Nashville Opera, Music City Drum and Bugle Corps and Nashville Ballet can all be found in Nashville. [More »](#)

Key Connections

People



Companies



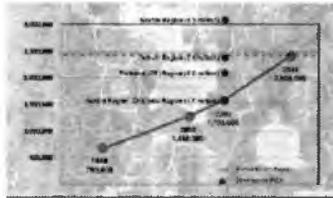
Appendix 38: Nashville Area MPO 2016

Regional Profile TEST

The greater Nashville region is poised to grow by leaps and bounds over the next couple of decades. Across the 10-county Cumberland Region around Nashville, the MPO forecasts close to another million people by the year 2035. Where those people will live, work, and play and the socio-economic characteristics of those folks will significantly influence the need for investments into our region's roads, transit, and walking and bicycling infrastructure.

Growth Trend across the 10-County Cumberland Region

In planning for our future, we must realize that we will be different in the years to come. By 2035, our region will be larger than the size of the Denver region is today - that's the magnitude of growth for which we must plan.



Population & Employment Forecast for the Nashville Area MPO

Select Language

	Year	MPO	Davidson	Maury	Robertson	Rutherford	Sumner	Williamson	Wilson
People	2006	1,394,928	613,856	77,550	61,708	230,980	148,534	159,094	103,206
	2015	1,637,000	654,879	89,371	73,949	298,734	172,232	229,052	128,783
	2025	1,904,300	702,871	101,595	87,563	349,083	197,500	308,328	157,360
Jobs	2035	2,174,914	752,326	114,005	101,324	409,986	223,124	387,970	186,179
	2006	983,074	559,435	44,773	29,573	131,831	57,236	108,904	51,322
	2015	1,128,118	618,891	50,722	34,251	155,284	64,282	143,628	61,060
Households	2025	1,316,029	687,059	58,019	40,223	187,195	73,129	196,539	73,865
	2035	1,536,746	755,684	65,964	47,049	226,453	83,053	269,755	88,788
	2006	557,156	262,173	30,295	23,196	86,816	57,539	57,805	39,332
Households	2015	675,667	289,832	36,218	28,874	112,778	70,052	86,846	51,467
	2025	799,466	316,455	41,962	34,894	139,114	82,970	119,252	64,829
	2035	913,442	338,140	47,182	40,511	163,719	95,226	150,817	77,747

Source: Woods & Poel Economics

RELATED RESOURCES

Regional Profile

- Regional Demographic Profile
- Regional Indicators Report
- US Census Bureau - American Community Survey

FOR MORE INFORMATION

Nicholas Lindeman
Economic & Systems Data Analyst
615-862-7198
lindeman@nashvillempo.org

STAY INVOLVED

Select

FOLLOW US



Select Language

Appendix 39: Nashville Area Chamber of Congress 2016

A Climate for Success.

The demographic picture of the Nashville region is one of a vibrant, growing and prosperous area. Consistent strong gains in population, a high level of educational attainment, and rising income levels are hallmarks of one of the nation's most dynamic growth centers. The demographic patterns showcase many of the characteristics that illustrate Nashville's comparative advantages in the nation with regard to young and talented workers, diversity of population, growth throughout the region and a variety of settings from urban to suburban to rural.

[Add to Report](#)

[Expand all](#)

Demographics

Population

Geography	2000	2010	2012	2013	2014
Nashville MSA	1,311,789	1,593,050	1,645,638	1,758,577	1,792,649
Nashville Economic Market	1,435,577	1,755,446	1,823,785	1,855,777	1,894,455
Davidson County	569,927	626,681	648,295	659,042	668,347

Source: U.S. Census Bureau

Age

Age	
0-19	26.5%
20-29	14.6%
30-39	14.0%
40-49	14.2%
50-64	19.1%
65+	11.7%

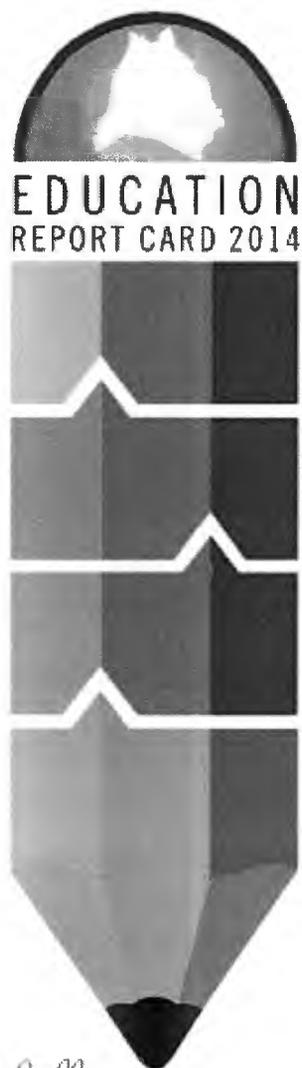
Source: U.S. Census Bureau, 2013

Race and Ethnicity

Race & Ethnicity	
White	78.1%
African American	15.3%
Asian	2.3%
American Indian/Alaska Native	0.3%
Other/two or more races	4.1%

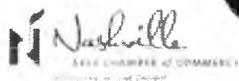
Source: U.S. Census Bureau, 2013

Appendix 40: Miller and Shaw 2015, Cover Page



2014 EDUCATION REPORT CARD

Submitted by the Chamber Education Report Card Committee
Co-Chairs Jackson Miller and Brian Shaw
Metropolitan Nashville Public Schools | 2013-2014 School Year



Miller and Shaw 2015, pg. 12

Enrollment and Capacity Comparison by 2013 vs. 2014 Academic Performance Framework Status

	Number of schools			Number of students			Number of students, excluding schools missing program capacity data*		
	2013	2014		2013	2014		2013	2014	
		w/ adj.	no adj.		w/ adj.	no adj.		w/ adj.	no adj.
Excelling	13	24	20	5,817	10,317	7,906	4,507	6,758	4,894
Achieving	11	10	10	7,293	4,614	4,733	7,015	4,574	4,336
Satisfactory	57	71	65	38,551	48,164	44,837	36,838	45,983	43,856
Review	33	27	25	18,262	13,330	13,807	18,262	17,739	13,216
Target	29	13	25	12,980	5,353	11,315	12,274	6,353	11,315
Total	143	145	145	82,903	82,598	82,598	78,896	77,407	77,407

*Calculations exclude schools that are missing program capacity data

The APF guides this Report Card's overall assessment of district progress over the past year, but its main purpose is to inform the decisions of district administrators. Schools that struggle on certain measurements included in the APF receive additional federal funds for such interventions as Reading Recovery, Lipscomb University's Literacy Partnerships or reading specialists. In addition, the APF informs the grouping of schools into networks mentored by a "lead principal." These lead principals are, in turn, selected through a competitive process that includes their school's APF ranking. And it is APF trend data, usually in three year increments, that helps inform decisions about a principal's continued leadership at a school or potential reassignment to another role. While much of the district's attention is focused on its lowest-performing schools, MNPS must push its average performers into the excelling category. Schools should be incentivized with additional resources designed to expand learning opportunities for proficient and advanced students.

While we believe Metro Schools made progress in 2014, more urgency is needed in turning around the district's lowest-performing schools. In our 2013 Report Card, our committee called for decisive action toward discontinuing persistently low-performing and under-enrolled schools, and MNPS is to be commended for transforming two such elementary schools to model pre-K centers this year. But clearly, with between 13 and 25 self-identified "target" schools, the pace of intervention must pick up. There was a justifiable outcry from the community and school board when the Tennessee Department of Education announced in August that the number of state-identified "priority" schools in MNPS more than doubled to 15. There was not as much focus on the fact that several of our schools likely dropped into the bottom 5 percent of all schools in Tennessee because Memphis City Schools successfully reduced its priority schools, closing nine and transferring 17 to the state-run Achievement School District. The willingness to take dramatic action toward this district's lowest-performing schools in the coming year will be a true test of leadership for the school board and director of schools.

Miller and Shaw 2015, pg. 35

Demographic Subgroup Data

Year	All		Economically disadvantaged		Students with disabilities		Limited English proficient	
	%	Number	%	Number	%	Number	%	Number
2014	100	82,808	73	60,200	12	10,297	15	12,675
2013	100	81,134	72	57,954	12	9,749	15	11,945
2012	100	74,580	72	56,268	13	9,396	14	11,287
2011	100	73,117	75	55,076	12	9,001	14	11,019
2010	100	71,708	72	51,882	12	8,746	14	10,485
2009	100	70,178	76	53,233	12	8,615	13	9,374
2008	100	70,140	73	50,861	12	8,658	11	7,934
2007	100	70,140	72	49,889	13	9,324	9	7,230
2006	100	73,144	61	44,449	14	9,773	7	5,128
2005	100	71,925	55	39,775	13	9,710	6	4,603
2004	100	69,445	52	36,459	15	10,347	7	5,069
2003	100	68,121	51	34,838	15	9,975	6	3,825
2002	100	68,727	49	33,251	15	10,583	7	4,643
2001	100	68,816	46	31,426	9	5,892	6	4,012
2000	100	66,345	45	30,360	15	10,593	5	3,212

Racial Subgroup Data

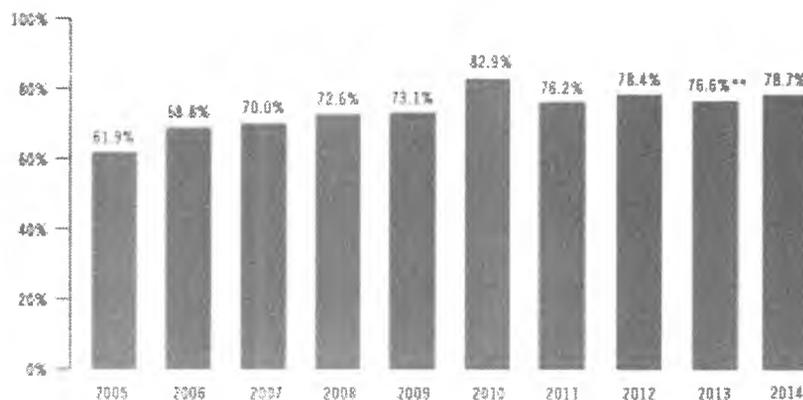
Year	Asian		Black		Hispanic		Native American		White	
	%	Number	%	Number	%	Number	%	Number	%	Number
2014	4	3,298	45	37,218	20	16,247	0.2	168	31	25,765
2013	4	3,215	45	36,757	19	15,095	0.2	147	32	25,810
2012	4	3,162	46	35,257	16	12,965	0.1	107	34	26,489
2011	4	3,141	46	37,118	17	13,422	0.2	128	33	26,972
2010	4	2,851	48	35,706	18	11,882	0.1	105	33	24,554
2009	3	2,577	48	35,711	15	11,195	0.2	115	33	24,791
2008	3	2,383	48	35,144	14	10,198	0.2	118	34	25,012
2007	3	2,655	47	35,554	13	10,457	0.2	134	36	28,483
2006	3	2,370	47	34,378	11	8,119	0.1	73	37	26,770
2005	3	2,445	48	34,555	10	7,264	0.2	144	38	27,475
2004	3	2,351	46	32,014	8	6,368	0.2	139	41	28,750
2003	3	2,323	46	31,227	8	5,329	0.2	136	43	29,741
2002	3	2,253	47	31,885	6	4,164	0.2	136	44	29,837
2001	3	2,244	46	31,555	5	3,401	0.2	135	45	30,811
2000	3	2,255	45	30,837	4	2,597	0.2	137	47	32,464

Miller and Shaw 2015, pg. 44

Graduation Rates

In Tennessee's accountability system under the ESEA waiver, there is a one-year lag between when a school district's high school graduation rate is reported and when that rate is applied towards district accountability. This delay allows for the inclusion of summer graduates in the graduation rate calculation. MNPS did not meet its graduation rate target of 79.8 percent in 2013, which was applied to 2014 accountability. However, the district's graduation rate of 78.7 percent in 2014 did exceed the target of 78.1 percent, so MNPS has already met one of its state accountability targets for next year.

MNPS Graduation Rates*



* Prior to 2010-2011, ELL and special education students were given a fifth year to complete a regular diploma.

**Policy changes in 2013 required more detailed documentation for students leaving the district, making the 2013 graduation rate less comparable to previous years.

Miller and Shaw 2015, pg. 47

Davidson County Compared to Peer Systems in Tennessee

All four large urban school systems are in need of achievement target improvements in at least one student subgroup. MNPS (Davidson County) ranks third out of the four districts in graduation rate, state achievement letter grades and ACT scores. MNPS also has a larger percentage of students who are economically disadvantaged than the other three counties, as well as an ELL population more than twice the size of the next closest district.

Comparison of the Four Large Urban School Systems in Tennessee

Year	Davidson County	Sebelly County	Knox County	Hamilton County
Accountability status	In Need of Subgroup Improvement (Asian)	In Need of Subgroup Improvement (White, Native American, Hawaiian/Pacific Islander)	In Need of Subgroup Improvement (White, Hispanic, students with disabilities, English Language Learners)	In Need of Subgroup Improvement (students with disabilities, English Language Learners)
Achievement measures	Achieve - Not Exemplary	Achieve - Not Exemplary	Achieve - Not Exemplary	Achieve - Not Exemplary
Gap closure measures	Miss - In Need of Subgroup Improvement	Miss - In Need of Subgroup Improvement	Miss - In Need of Subgroup Improvement	Miss - In Need of Subgroup Improvement
Reward Schools (2014)	18 out of 168 (11% of state's Reward Schools)	42 out of 168 (25% of state's Reward Schools)	5 out of 168 (3% of state's Reward Schools)	6 out of 168 (4% of state's Reward Schools)
Priority Schools (2012-2013 through 2014-2015)	15 out of 85 (18% of state's Priority Schools)	50 out of 85 (59% of state's Priority Schools)	4 out of 85 (5% of state's Priority Schools)	5 out of 85 (6% of state's Priority Schools)
Focus Schools (2012-2013 through 2014-2015)	9 out of 144 (6% of state's Focus Schools)	13 out of 144 (9% of state's Focus Schools)	9 out of 144 (6% of state's Focus Schools)	3 out of 144 (2% of state's Focus Schools)
2014 graduation rate	78.70%	74.66%	88.70%	82.60%
Student enrollment	82,806	149,928	59,232	43,531
Grades 3-8 TCAP criterion-referenced academic achievement letter grades (math, reading, science, social studies)	B C C C	B C C B	A A A A	A B B B
Grades 4-8 value-added growth standard letter grades (math, reading, science, social studies)	A C B B	N/A	A C B A	A C B B
Percent scoring 21 or above on 2014 ACT	29.30%	25.40%	45.90%	36.30%
Economically disadvantaged students	72.70%	58.90%	49.50%	56.70%
Students with disabilities	12.40%	13.30%	14.20%	13.20%
English Language Learners	15.30%	6.60%	3.70%	4.50%
Per pupil expenditure	\$11,452.70	\$10,333.20	\$9,341.50	\$9,752.90

Appendix 41: Adventure Science Center Learning Guide 2016

ADVENTURE SCIENCE CENTER

STEM

PROFESSIONAL DEVELOPMENT
FOR TEACHERS

EXPLORE YOUR OPTIONS

SEARCH

or search by keyword...

SEARCH BY KEYWORD

SEND A REQUEST

Request your activity date & time today!

REQUEST

PREPARE FOR YOUR DAY

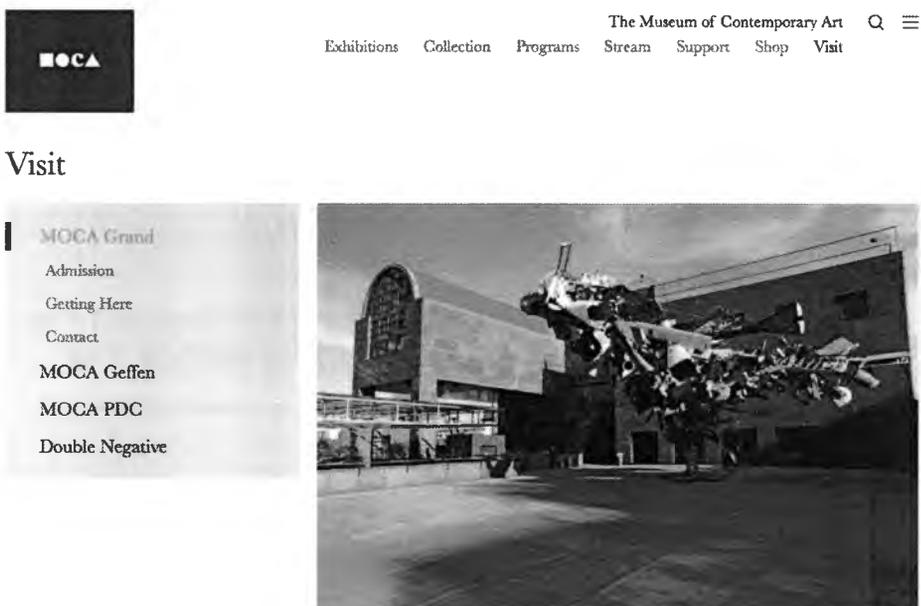
Find tips and resources for your trip.

MORE

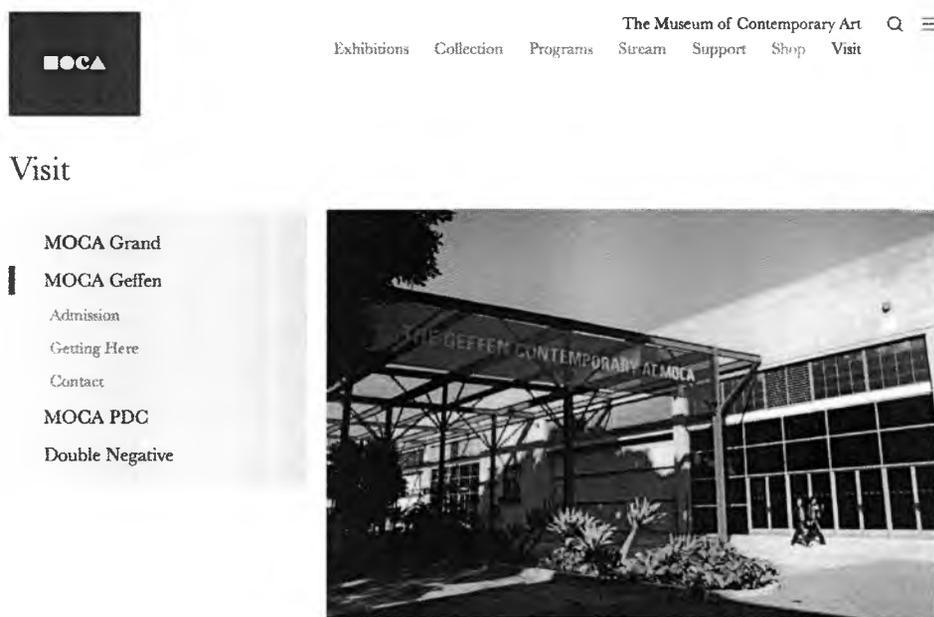
800 Fort Negley Blvd | Nashville, TN 37203 | Reservations: (615) 862-5177
 HOURS: Daily 10 am - 5 pm every day except Thanksgiving & Christmas Day
[Adventure Science Center Home](#) | [Visit](#) | [Planetarium](#) | [Membership](#) | [Support Us](#) | [About Us](#) | [Contact Us](#)

SELF-GUIDED | tinkering | 2015 - 2016 LEARNING EXPEDITION

Appendix 42: Museum of Contemporary Art (MOCA) 2016a



Museum of Contemporary Art (MOCA) 2016b



Museum of Contemporary Art (MOCA) 2016c



The Museum of Contemporary Art  
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- [MOCA Geffen](#)
- [MOCA PDC](#)**
- [Admission](#)
- [Getting Here](#)
- [Contact](#)
- [Double Negative](#)



Museum of Contemporary Art (MOCA) 2016d



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Board

Officers

Life Trustees

Staff

Board of Trustees

The board of trustees of MOCA are self-elected representatives of the public interest, and fiduciaries of the institution's resources. Their primary role is to encourage the realization of the museum's goal to present a quality program in contemporary art and culture.



moca.org Donors

Press Room

Jobs & Internships

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Lilly Tartikoff Karatz, Co-Chair

Eugenio Lopez, Vice Chair
Lillian P. Lovelace, Vice Chair
Maria Seferian, Vice Chair
Clifford J. Einstein, Chair Emeritus
David G. Johnson, Chair Emeritus
Dallas Price - Van Breda, President Emeritus
Jeffrey Soros, President Emeritus

Wallis Annenberg
John Baldessari
Mark Bradford
Peter Brant
Gabriel Brener
Steven A. Cohen
Charles L. Conlan II
Kathi B. Cypres
Laurent Degryse
Ariel Emanuel
The Honorable Eric Garcetti*
Susan Gersh
Aileen Getty
Nancy Jane F. Goldston
Laurence Graff

■●▲

Laurence Graff
 Mark Grotjahn
 Michael Harrison*
 Bruce Karatz
 Barbara Kruger
 Wonmi Kwon
 Daniel S. Loeb
 Mary Klaus Martin
 Jamie McCourt
 Edward J. Minskoff
 Steven T. Mnuchin
 Catherine Opie
 Victor Pinchuk
 Lari Pittman
 Heather Podesta
 Carolyn Clark Powers
 Steven F. Roth
 Carla Sands
 Chara Schreyer
 Adam Sender
 Darren Star
 Sutton Stracke
 Cathy Vedovi
 Philippe Vergne*
 Christopher Walker
 Council President Herb J. Wesson Jr.*
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Eli Broad, Founding Chairman
 Betye Monell Burton
 Blake Byrne
 Lenore S. Greenberg
 Audrey Irmas
 Frederick M. Nicholas
 Thomas E. Unterman

*Ex-Officio

Museum of Contemporary Art (MOCA) 2016e



The Museum of Contemporary Art

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Welcome to The Museum of Contemporary Art, Los Angeles

We are contemporary.

We question and adapt to the changing definitions of art.

We are a museum.

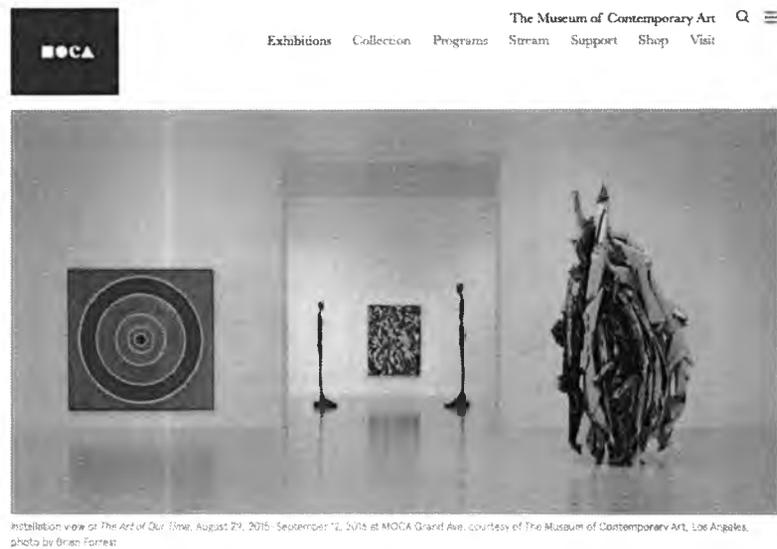
We present, collect, and interpret the art of our time.

We care for the experience of art, the inevitability of change, the multiplicity of perspectives, the urgency of contemporary expression.

With three distinct venues in Los Angeles—MOCA Grand Avenue, The Geffen Contemporary at MOCA, and MOCA Pacific Design Center—and Michael Heizer's seminal artwork *Double Negative* (1969-70) in the Nevada desert, we engage audiences through an ambitious program of exhibitions, educational programs, and publishing.

We are committed to the collection, presentation, and interpretation of art created after 1940, in all media, and to preserving that work for future generations. We provide leadership in the field by identifying and presenting the most significant and challenging art of our time, actively supporting the creation of new work, and producing original scholarship.

Museum of Contemporary Art (MOCA) 2016f



The Art of Our Time

ON VIEW AUG 15, 2015 - SEPT 12, 2016

MOCA Grand Avenue

SHARE

Chief Curator Helen Molesworth has installed an exhibition highlighting the affinities between artists and artworks in an attempt to rethink the now conventional chronological installation of art. By exploring connections that emerge through artist friendships, the history of art schools, and artists' own stated interest in other artists' work, this presentation of MOCA's esteemed collection of post-1945 art highlights iconic works alongside lesser-known material drawn from the nearly 7000 objects in MOCA's collection. Recently acquired work is on view, securing towards MOCA's newly invigorated collecting. MOCA's collection is considered to be among the most important collections of post-war art in the world; this installation aims to reintroduce its richness and depth as well as signal a new era of scholarship and a renewed commitment to collecting at the institution.

The Art of Our Time is organized by Chief Curator Helen Molesworth.

Lead support is provided by The Sydney Irmas Exhibition Endowment, the Margaret and Daniel Loeb Third Point Foundation and the MOCA Projects Council.

In-kind media support is provided by KCETLink.

Museum of Contemporary Art (MOCA) 2016g



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BROWSE THE COLLECTION 

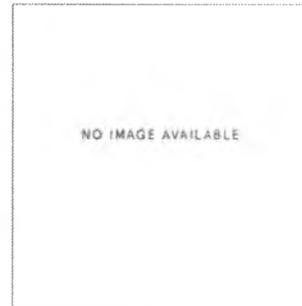
Selected Works on View



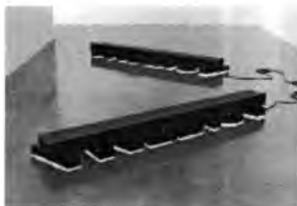
1984
Construct NYC 20
Barbara Kasten



1945
Dépouille
Jean Fautrier



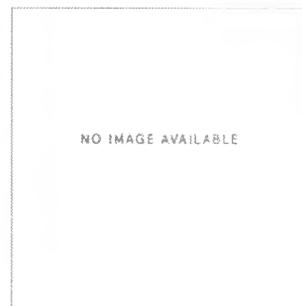
1963
Telephone
Andy Warhol



2015
United (America, America)
Glenn Ligon



1994
Audition Four: Kathleen and Max



Museum of Contemporary Art (MOCA) 2016h



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Visit

[MOCA Grand](#)

[MOCA Geffen](#)

[MOCA PDC](#)

[Double Negative](#)

[Hours](#)

[Admission](#)

[Getting Here](#)



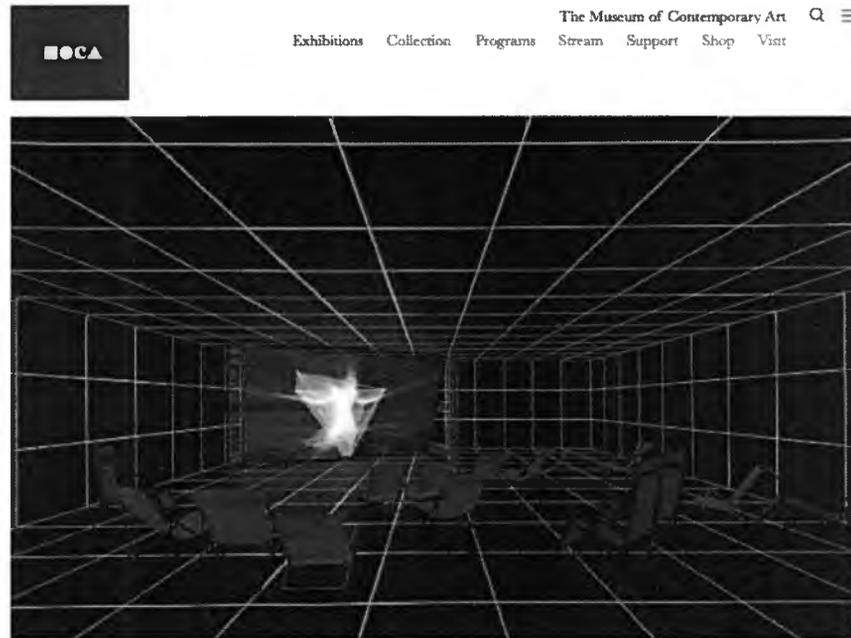
Michael Heizer, *Double Negative*, 1969-1970, 240,000-ton displacement of rhyolite and sandstone, Mormon Mesa, Overton, Nevada, courtesy of The Museum of Contemporary Art, Los Angeles, Gift of Virginia Dwan

Double Negative (1969-70) is a work of land art by the artist Michael Heizer. It is located in the Moapa Valley on Mormon Mesa near Overton, Nevada. *Double Negative* was acquired into MOCA's permanent collection in 1985.

Hours

Double Negative (1969-70) by artist Michael Heizer is on view 24/7, 365 days a year.

Museum of Contemporary Art (MOCA) 2016i



Installation view of Hito Steyerl: *Factory of the Sun*, February 21–September 12, 2016 at MOCA Grand Avenue, courtesy of The Museum of Contemporary Art, Los Angeles. photo by Justin Lubliner

Hito Steyerl: *Factory of the Sun*

ON VIEW FEB 21 - SEPT 12, 2016

MOCA Grand Avenue

MOCA presents the U.S. premiere of Hito Steyerl's landmark video installation *Factory of the Sun*. In this immersive work, which debuted at the 2015 German Pavilion at the Venice Biennale, Steyerl probes the pleasures and perils of image circulation in a moment defined by the unprecedented global flow of data. Ricocheting between genres—news reportage, documentary film, video games, and internet dance videos—*Factory of the Sun* uses the motifs of light and acceleration to explore what possibilities are still available for collective resistance when surveillance has become a mundane part of an increasingly virtual world. *Factory of the Sun* tells the surreal story of workers whose forced moves in a motion capture studio are turned into artificial sunshine.

SHARE

Hito Steyerl: Factory of the Sun is organized by MOCA Assistant Curator Lenka Tetterseil.

Museum of Contemporary Art (MOCA) 2016j



Catherine Opie: 700 Nimes Road

ON VIEW JAN 23 - MAY 8, 2016

MOCA Pacific Design Center

Catherine Opie, *700 Nimes Road* presents new and recent work by Los Angeles-based artist Catherine Opie, an essential figure in contemporary photography. Taken over the course of six months at the Bel-Air, California, residence of the late actress Elizabeth Taylor, the exhibition's photographs are drawn from two series: *Closets and Jewels*, and *700 Nimes Road*. Inspired by William Eggeston's images of Elvis Presley's Memphis estate, Graceland, Opie creates a portrait of Taylor from her personal space and mementos. The artist photographs rooms, closets, shoes, clothing, and jewelry that depict an indirect, yet deeply intimate, portrait of a life defined by wealth and fame. In the artist's words, the project is not about the relationship to celebrity but about "the relationship to what is human."

SHARE

Lead support for MOCA Pacific Design Center is provided by Charles S. Cohen.

PDC

Major support for the exhibition is provided by J.P. Morgan Private Bank.

Generous support for the exhibition is provided by Jamie McCourt, and Gilena Simons.

Museum of Contemporary Art (MOCA) 2016k



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Don't Look Back: The 1990s at MOCA

ON VIEW MAR 12 - JULY 11, 2016

 The Geffen Contemporary at MOCA

Museum of Contemporary Art (MOCA) 2016I

The Museum of Contemporary Art

Exhibitions Collection **Programs** Stream Support Shop Visit

MARCH 2016

ALL LOCATIONS

ALL EVENT TYPES

EVERY THURSDAY: 6PM & 7PM

EVERY SATURDAY AND SUNDAY: 12PM

Exhibition Highlight Tours

Educators offer walkthroughs of current exhibitions at MOCA Grand Avenue and The Geffen Contemporary at MOCA. Walkthroughs begin in the lobby and last about 45 minutes; no reservations are required for individuals.

[Learn More](#)

THURSDAY
MAR 3, 7PM

LECTURE

What is Contemporary? Suzanne Hudson and Laura Owens in Conversation

Los Angeles-based artist Laura Owens and art critic and historian Suzanne Hudson discuss the landscape of painting in our city. Part of MOCA's new series about contemporaneity in art, their discussion explores this moment in Los Angeles as particularly rich for painting. The city's wealth of art schools and the sup...

[MOCA Grand Avenue](#)

SUNDAY
MAR 6, 3PM

ALL AGES

Sunday Studio

Sunday Studio is MOCA's drop-in gallery exploration and studio art program. Participate in an all-ages tour of MOCA's permanent collection or join a conversation about *Hito Steyerl: Factory of the Sun*, the Berlin-based artist's futuristic multimedia installation. Investigate...

[MOCA Grand Avenue](#)

Museum of Contemporary Art (MOCA) 2016m



The Museum of Contemporary Art

Exhibitions Collections Programs Stream Support Shop Visit



Sunday Studio

ALL AGES

Sunday Studio is MOCA's drop-in gallery exploration and studio art program. Participate in an all-ages tour of MOCA's permanent collection or join a conversation about *Hito Steyerl: Factory of the Sun*, the Berlin-based artist's futuristic multimedia installation. Investigate artist Barbara Krastin's theatrical, otherworldly photographs, which capture geometric arrangements of color and light, and then learn how to take photos in new ways as you construct, arrange, and light your own dramatic environments with MOCA educators in our pop-up studio.

WHEN
Sunday, Mar 6, 2016
1pm

WHERE
MOCA Grand Avenue
290 South Grand Ave Los Angeles, CA
90012

COMMISSION
FREE

PHONE (626)
713/621-1249 education@mooca.org

Museum of Contemporary Art (MOCA) 2016n



The Museum of Contemporary Art

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Education

Teachers

- Contemporary Art Start (CAS)
- Tours for 3rd-12th Grade
- Programs for Art Educators
- Professional Development
- Workshops at Schools

Teens

All Ages

Tours



Bring the power of contemporary art into your classroom. Offering tours, MOCA's yearlong professional development program Contemporary Art Start (CAS), special programs for visual art teachers, and more.

Museum of Contemporary Art (MOCA) 2016o



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Education

- Teachers
- Teens
- All Ages
- Tours
- 3rd-12th Grade
- Adults



Image courtesy of The Museum of Contemporary Art, Los Angeles. photo by Jennie Pham

Museum of Contemporary Art (MOCA) 2016p



The Museum of Contemporary Art  
Exhibitions Collection Programs Stream Support Shop Visit

Education

- Teachers
- Teens**
 - MOCA teen program
 - Teen Night
 - The Long-Term Impact of Teen Programs
- All Ages
- Tours



Image courtesy of The Museum of Contemporary Art, Los Angeles, photo by Sean MacGillivray

MOCA invites teens to connect with the museum, art, and the community through programs created by teens, for teens, such as the annual Teen Night and the MOCA teen program.

MOCA teen program



Appendix 43: Norton Simon Museum 2016

Norton Simon Museum

Search Entire Site SEARCH

Visit Collections Exhibitions Events Education Membership Multimedia Store Information



About the Museum

The Norton Simon Museum is known around the world as one of the most remarkable private art collections ever assembled. Over a thirty-year period 20th-century industrialist Norton Simon (1907–1993) amassed an astonishing collection of European art from the Renaissance to the 20th century and a stellar collection of South and Southeast Asian art spanning 2,000 years. Among the most celebrated works he collected are Branchini Madonna, 1427, by Giovanni di Paolo; Madonna and Child with Book, c. 1502-03, by Raphael; Still Life with Lemons, Oranges and a Rose, 1633, by Francisco de Zurbarán; Portrait of a Boy, c. 1655-60, by Rembrandt van Rijn; Mulberry Tree, 1889, by Vincent van Gogh; Little Dancer Aged Fourteen, 1878-81, by Edgar Degas; and Woman with a Book, 1932, by Pablo Picasso. Highlights from the Asian collection include the bronze sculptures Buddha Shakyamuni, c. 550, India: Bihar, Gupta period, and Shiva as King of Dance, c. 1000, India: Tamil Nadu; and the gilt bronze Indra, 13th century, Nepal.



In 1974, Norton Simon and a reorganized Board of Trustees assumed control of the Pasadena Art Museum, taking up management of its building and incorporating its important collection of 20th-century European and American art with the outstanding collections of the Norton Simon foundations. Highlights from the PAM collection include the Galka Scheyer Blue Four Collection, a body of works by artists Lyonel Feininger, Paul Klee, Alexei Jawlensky, Vasily Kandinsky and others assembled by art dealer, scholar and muse Galka Scheyer; post-war American art, particularly from Southern California-based artists including John Altoon, Larry Bell, Wallace Berman, Bruce Conner, Richard Diebenkorn, Lynn Foulkes, Sam Francis, George Herms, Robert Irwin, and Ed Ruscha; and a photography collection comprised of works by Ansel Adams, Lewis Baltz, Manuel Alvarez Bravo, Imogen Cunningham, Frederick Sommer, Edward Weston, and Minor White, among others.

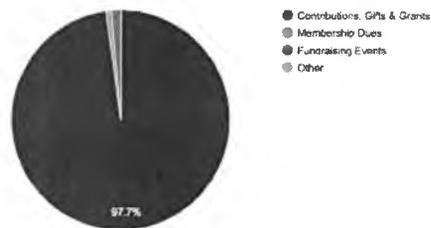
- About the Museum
- About Norton Simon
- Museum History
- Architecture
- Sculpture Garden
- Board of Trustees
- News Room
- Opportunities
- Policies
- Image Rights
- FAQ
- Contact Us

Appendix 44: Charity Navigator 2016

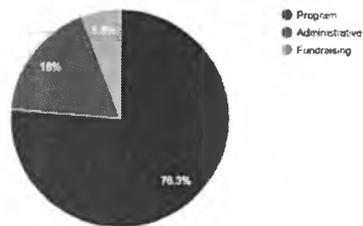
Income Statement (FYE 06/2014)	
REVENUE	
Contributions	
Contributions, Gifts & Grants	\$86,503,112
Federated Campaigns	\$0
Membership Dues	\$672,639
Fundraising Events	\$1,310,792
Related Organizations	\$0
Government Grants	\$12,500
Total Contributions	\$88,499,043
Program Service Revenue	\$1,639,482
Total Primary Revenue	\$90,138,525
Other Revenue	\$1,380,312
TOTAL REVENUE	\$91,518,837
EXPENSES	
Program Expenses	\$11,336,882
Administrative Expenses	\$2,668,565
Fundraising Expenses	\$856,296
TOTAL FUNCTIONAL EXPENSES	\$14,861,743
Payments to Affiliates	\$0
Excess (or Deficit) for the year	\$76,654,974
Net Assets	\$118,527,430

Charts

Contributions Breakdown



Expenses Breakdown



Revenue/Expenses Trend



Appendix 45: The Getty 2016



Who We Are
Mission and Vision

Mission and Vision

Mission

The J. Paul Getty Trust is a cultural and philanthropic institution dedicated to the presentation, conservation, and interpretation of the world's artistic legacy.

Through the collective and individual work of its constituent programs—the Getty Conservation Institute, the Getty Foundation, the J. Paul Getty Museum, and the Getty Research Institute—the Getty pursues its mission in Los Angeles and throughout the world, serving both the general interested public and a wide range of professional communities in order to promote a vital civil society through an understanding of the visual arts.

[Explore the history of the Getty »](#)

Vision

The Getty and its four programs are dedicated to the proposition that works of art are windows onto the world's diverse and intertwined histories, mirrors of humanity's innate imagination and creativity, and inspiration to envision the future.

To this end, the Getty works to:

- Enhance understanding of art through innovative, digitally driven research, shared for the benefit of the widest possible audience.
- Strengthen and broaden our collections to provoke the curiosity of scholars and visitors alike.
- Chart a new course for how art, humanities, and cultural and public policy can together foster a more inclusive, vibrant civil society.
- Serve as a convener and catalyst in the cultural life of Los Angeles, and
- Offer transformative experiences for visitors to our collections, gardens, and facilities at the Getty Center, the Getty Villa, and the Getty's presences online, free of charge now and forever.



Appendix 46: The Capital Group 2016



Caring for Our Communities

Each year, associates personally support more than 2,000 nonprofit organizations through donations and volunteer work. In turn, Capital Group and its charitable foundation enhance that support with funding in the form of grants and matching gifts. During the past 10 years, we've contributed more than \$200 million to charitable organizations around the world.

Appendix 47: Annenberg Foundation 2016



Advancing a Better Tomorrow through Visionary Leadership Today

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About the Foundation



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About the Foundation

The **Annenberg Foundation** is a family foundation established in 1989. Founded by Walter H. Annenberg, publisher and ambassador, the Foundation supports the worldwide community through its grantmaking, technical assistance and direct charitable activities.

Our Story
Read about and watch a video related to the Foundation which was founded by publisher, ambassador and philanthropist Walter H. Annenberg.

Directors' Activities
The following activities were initiated by the unique philanthropic vision of the Board of Directors.

Milestones and Moments
Significant grants and important events throughout the Foundation's history.

Mission, Values and Vision
Encouraging the development of more effective ways to share ideas and knowledge.

Governance
The **Annenberg Foundation** is committed to transparency and accessibility and has posted its governance policies as an extension of those values.

Financial Information
Annual Internal Revenue Service information available.

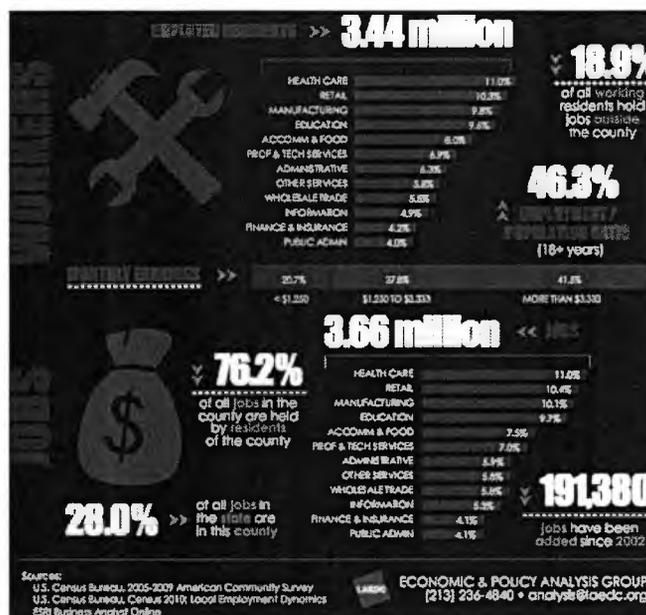
Staff
Headquartered in Los Angeles with a presence in Conshohocken, Pennsylvania and Washington, DC.

Employment Opportunities
Learn about job opportunities available within the Foundation and its initiatives.

Contact Us

2000 Avenue of the Stars
Suite 1000 S
Los Angeles, CA 90067
ph: (310) 209-4560
fax: (310) 209-1631
info@annenberg.org

Appendix 48: LAEDC 2010



Appendix 49: California Department of Education 2016



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California Public School Directory

Search Results

Search Criteria: Public Schools; County - Los Angeles; Type - High Schools (Public); Status - Active/Pending

1 - 25 of 334 schools (click on the County Name, District Name, or School heading links to re-sort the results)

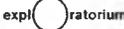
CDS Code	County Name	District Name	Select School name below for details	Status	Zip Code
19642121930361	Los Angeles	ABC Unified	Artesia High	Active	90715-1516
19642121930056	Los Angeles	ABC Unified	Cerritos High	Active	90703-8450
19642121933159	Los Angeles	ABC Unified	Gahr (Richard) High	Active	90703-2533
19642121931880	Los Angeles	ABC Unified	Whitney (Gretchen) High	Active	90703-1244
19753090130781	Los Angeles	Acton-Agua Dulce Unified	Academy of Arts and Sciences: Los Angeles (9-12)	Active	91316-1718
19753090131557	Los Angeles	Acton-Agua Dulce Unified	Method Schools High	Active	91006-1848
19753090131383	Los Angeles	Acton-Agua Dulce Unified	SIAtech Academy South	Active	90014-3921
19753091995786	Los Angeles	Acton-Agua Dulce Unified	Vasquez High	Active	93510-1641
19757131930163	Los Angeles	Alhambra Unified	Alhambra High	Active	91801-3716
19757131934553	Los Angeles	Alhambra Unified	Mark Keppel High	Active	91801-5716
19757131937697	Los Angeles	Alhambra Unified	San Gabriel High	Active	91776-2342
19642460126003	Los Angeles	Antelope Valley Union High	Academies of the Antelope Valley	Active	93536-4540

Appendix 50: Kids Data 2016

California	Percent
African American/Black	6.0%
American Indian/Alaska Native	0.6%
Asian/Asian American	8.8%
Filipino	2.5%
Hispanic/Latino	53.6%
Native Hawaiian/Pacific Islander	0.5%
White	24.6%
Multiracial	2.8%

Los Angeles County	Percent
African American/Black	8.1%
American Indian/Alaska Native	0.3%
Asian/Asian American	7.6%
Filipino	2.2%
Hispanic/Latino	65.0%
Native Hawaiian/Pacific Islander	0.4%
White	14.3%
Multiracial	1.6%

Appendix 51: Exploratorium (EXPLO) 2014a



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History

The Exploratorium opened to the public in the fall of 1967. Richard M. Nixon was president, and the Vietnam War and racial tensions continued to divide the nation. Neil Armstrong had just taken humankind's first walk on the moon. Andy Warhol was creating pop-art images of soup cans, and the hot tub had just been introduced in California. More than 70 million children from the post-war baby boom were becoming teenagers and young adults, and San Francisco had become a nexus for social experimentation. It was the perfect place—and the perfect time—to try out a new way of learning.

Frank Oppenheimer, then 57 years old, had already had three life-shaping careers before coming to San Francisco. A brilliant physicist in his own right, he'd been a university professor and worked beside his brother, J. Robert Oppenheimer (known to some as the "father" of the atomic bomb), on the Manhattan Project of the 1940s. Bored from pursuing scientific research during the McCarthy era of the 1950s, Frank retreated to small-town Colorado and became a cattle rancher. Before long, his passion for knowledge and learning led him back to teaching, and he began to share his view of the world with students at the local high school.

Conjuring the methods of his own life experiences, Frank was no typical science teacher. He just took the textbook and filled his classroom with the hands-on tools and materials that had become his trademark and that would ultimately lead him to create the Exploratorium. In 1969, Frank's dream of transforming science education brought him to San Francisco and to the cavernous—and very empty—Palace of Fine Arts, which was once part of the 1915 [Panama-Pacific International Exposition](#) in San Francisco's Marina District.

Frank found heart and soul in his "San Francisco Project," working alongside the artists, educators, and developers whose job it was to build and maintain Exploratorium exhibits and help visitors use them. He served as the museum's creator until just before his death in 1985. The Exploratorium grew enormously during the 1980s, continuing the work Frank set in motion. In 1987, Dr. Robert L. White became the Exploratorium's Director. At the time, Dr. White was Chairman of Stanford University's Electrical Engineering department. He served as Director until 1990. In 1991, renowned French physicist and educator Dr. Godely Delacôte joined the Exploratorium and served as Executive Director until 2005. Dr. Delacôte worked toward extending the reach of the museum through reworking—increasing outreach, expanding professional development programs for educators, creating an expanded Web presence, and supporting the formation of museum partnerships in the United States and abroad.

Today

Today, the Exploratorium is led by Dr. Dennis Barnett, a nationally known science education and policy expert dedicated to strengthening the Exploratorium's culture of lifelong learning. Under his guidance, the museum has begun a new phase of growth and exploration, including a move, in April 2013, to a new location on Pier 15 along San Francisco's Embarcadero.

With a goal of influencing educational policy throughout the country, programs have been designed to make connections between the traditionally separate worlds of formal and informal education, connecting the way science is taught in schools with the way it's approached in science centers, making rarely seen scientific research accessible to the public, and providing a venue for scientists and artists to interact directly with live audiences.

Over the past few years, Exploratorium scientists, builders, and educators have pioneered innovative ways to make these connections, working with everyone from researchers at the South Pole and NASA scientists studying the atmosphere of the sun, to playground designers creating immersive experiences for children, to Tibetan monks learning Western science and technology—particularly the Exploratorium's approach to inquiry-based science and hands-on investigation. While the Exploratorium's philosophy remains the same, its scope of work has grown exponentially over the years.

exploratorium

Pier 15
 (Embarcadero at Green Street)
 San Francisco, CA 94111
 (415) 778-4444
[Make Contact Info](#)

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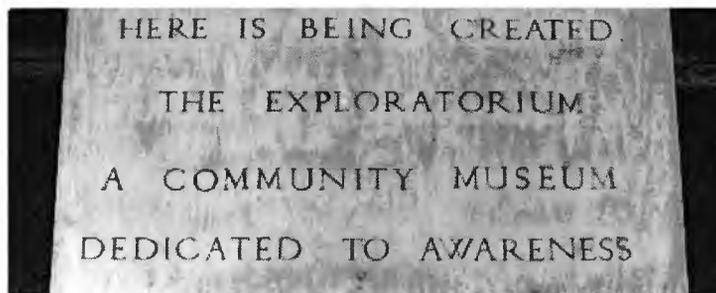
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Our Story

If you visit the museum in person or online, you only see part of who we are. Here are some things you might not know about us.

We Broke the Science Museum Mold

The Exploratorium was the brainchild of [Frank Oppenheimer](#). At various times, Frank was a professor, a high school teacher, a cattle rancher, and an experimental physicist.

While teaching at a university, Frank developed a "library of experiments" that enabled his students to explore scientific phenomena at their own pace, following their own curiosity. Alarmed by the public's lack of understanding of science and technology, Frank used this model to create the Exploratorium, believing that visitors could learn about natural phenomena and also gain confidence in their ability to understand the world around them. This was a groundbreaking idea for a science museum in 1969 when the Exploratorium opened. And the rest is [history](#).

We Intertwine Art and Science

Frank Oppenheimer viewed art and science as complementary ways of exploring the world, and incorporated both into the Exploratorium from its earliest days—a pioneering idea at the time that's been woven into the fabric of the institution. Today, artists and scientists continue to work alongside each other in envisioning new ideas and directions for the museum and its programs. Their common goal: to support a culture of experimentation and collaboration, inspire curiosity and understanding, and stimulate fresh ideas and directions.

We Have Explainers, Who Are Different from Docents

Many museums have docents—people who lead guided tours. We have young, orange-vested High School and Field Trip Explainers, who, in keeping with the Exploratorium philosophy, are engaged in both teaching and learning. Explainers are a diverse group of young people who are trained and supported by staff scientists and educators. The experience provides them with an enthusiasm for learning, as well as knowledge and communication skills that serve them throughout their personal and professional lives. Our explainer programs started in the early days of the Exploratorium and quickly became a model for museums worldwide.



Support Us

What's the impact of your gift?



Become a Member

Support and Inspire

Exploratorium (EXPLO) 2014c

Recent Projects



CIENCIA PÚBLICA: AGUA

This parklet exploring the science of water lives outside a school in SF's Mission neighborhood.



BUCHANAN MALL

We're helping local residents envision a safe, green, well-used park—and then build it.



NATIONAL AQUARIUM, BALTIMORE

SPS is working with the aquarium in Baltimore to plan exhibits along their waterfront site.

Recent Blog Posts



Buchanan Mall - Behind the Scenes

by [Steve Gennrich](#) - January 1, 2016



Skateboard Science Parklet in South Africa

by [Steve Gennrich](#) - December 26, 2015

AIASF

AIA NEXT In Two Weeks

by [Adam Green](#) - October 30, 2015

Exploratorium (EXPLO) 2014d



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Impact

Year One at the Piers

How far have we come in our first year at Pier 15? We've multiplied our impact!

2X

Free-Day Admissions (8,000 per day)

2X

Visitors (1.1 million)

2X

Free Student Field Trip Visits
(52,000)

3X

Space Filled with Exhibits &
Experiences (330,000 sq. ft.)

3X

Teachers Served (50,000+)

4X

Membership (44,000)

5X

Adult Visitors at After Dark events
(60,000)

We were honored...

PLATINUM LEED CERTIFICATION

awarded to our building

OUTSTANDING ACHIEVEMENT

recognized for outstanding
achievement by the California
Preservation Foundation

TOP HONORS

received in the 2014 Urban Land
Institute Global Awards for Excellence

PUBLIC SERVICE AWARD WINNER

first museum to win National Science
Foundation honor

INTERNATIONAL RECOGNITION

more than 80% of the world's science
centers use Exploratorium-designed
exhibits

And our community grew

2,000 CHILDREN & FAMILIES

received free science workshops

70,000 SOCIAL MEDIA FOLLOWERS

on Facebook, Twitter, and more

13 MILLION VISITS

to exploratorium.edu to view 50,000
pages of original content



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Revenue

- 33.4% Private Contributions
- 10% Government Grants
- 56.6% Earned Income



Expenses

- PROGRAM SERVICES
 - 52.8% Visitor, Learner, & Educator Programs
 - 13.1% Global Studios
 - 5.7% Admissions and Other
 - 5% Store Expenses
- SUPPORT SERVICES
 - 14.2% General & Administrative
 - 9.2% Fundraising & Membership

Operating Revenues and Expenses 2014

Operating Revenues	
Private Contributions	\$16,249,568
Government Grants	\$4,835,109
Earned Income	\$27,503,875
Total Operating Revenues	\$48,588,552

Operating Expenses

PROGRAM SERVICES	
Visitor, Learner, and Educator programs	\$25,449,051
Global Studios	\$6,306,575
Admissions and Other	\$2,751,613
Store Expenses	\$2,406,546

SUPPORT SERVICES	
General and Administrative	\$6,835,717
Fundraising and Membership	\$4,431,576

Total Operating Expenses	\$48,181,078
---------------------------------	---------------------

Financial Position 2014

Assets

Cash and Cash Equivalents	\$6,594,885
Receivables	\$27,633,301
Other	\$12,302,079
Investments	\$28,265,760
Property and Equipment	\$205,171,193
Total Assets	\$279,967,218

Liabilities

Accounts Payable	\$940,980
Other Accrued Expenses	\$3,869,003
Deferred Revenue	\$5,641,836
Other Long-Term Liabilities	\$111,494,185
Total Liabilities	\$121,946,004

Net Assets

Unrestricted	\$124,464,153
Temporarily Restricted	\$11,900,666
Permanently Restricted	\$21,656,395
Total Net Assets	\$158,021,214

Total Liabilities and Net Assets	\$279,967,218
---	----------------------

Exploratorium (EXPLO) 2014f



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Planned Giving

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The Exploratorium Lab

Spring Gala

Science of Cocktails

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Become a Volunteer

A volunteer project at the Exploratorium is a marvelous opportunity to participate behind the scenes in this hands-on museum of science, art, and human perception. In exchange for contributing your time and sharing your talents, you can engage your curiosity by learning new things, interact with visitors and volunteers from around the world, and most of all, have fun!

The dynamic community of Exploratorium volunteers brings curiosity, enthusiasm, and dedication to its volunteer work, providing the museum with fresh perspectives and invaluable assistance. Recent volunteers have included welders, stockbrokers, architects, technical writers, research scientists, artists, teachers, and students. Everyone is welcome to [apply](#) (minimum age 15), including international volunteers.

About the Volunteer Program

Volunteer projects vary throughout the year. There's always a need for all types of skills and experiences, so you don't need to be a scientist or an expert to apply. The program is flexible, matching available opportunities to your talent and availability. Volunteers often move on to another project or area of the museum after completing their initial assignments.

Volunteers help with a wide range of projects, from exhibit maintenance to administrative tasks, from educational programs to special events. Most volunteer projects begin with one-on-one training with a staff supervisor and then develop into independent work.

Whether you're an individual interested in [choosing projects](#) or a group wishing to participate in a [Done-in-a-Day](#) program, you can help provide vital services and support to many departments within the Exploratorium. The Exploratorium could not operate without the contributions of more than two hundred active volunteers who contribute their time, ideas, and energy. Their unique talents enable the museum to offer its current level of services to the community.

Volunteer Application Forms

Complete a volunteer application form online today to get involved at the Exploratorium!

- [Individual Volunteer Application](#)
- [Corporate Group Volunteer Application](#)
- [School Group or Club Volunteer Application](#)

We Love Our Volunteers

We'd like to give a shout-out to all of our Exploratorium volunteers—they help make a wide range of projects happen, from exhibit maintenance to administrative tasks, and from educational programs to special events. THANK YOU for being a part of our community!

Contact Us

If you have any questions, please contact the Volunteer Department:

(415) 528-4364
Fax: (415) 528-4370

volunteers@exploratorium.edu
Pier 15
San Francisco, CA
94111

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About Us

Located in San Francisco, California, the Exploratorium is a public learning laboratory exploring the world through science, art, and human perception. Our mission is to create inquiry-based experiences that transform learning worldwide. Our vision is a world where people think for themselves and can confidently ask questions, question answers, and understand the world around them. We value lifelong learning and teaching, curiosity and inquiry, our community, iteration and evidence, integrity and authenticity, sustainability, and inclusion and respect.

We create tools and experiences that help you to become an active explorer: hundreds of explore-for-yourself exhibits, a website with over 50,000 pages of content, film screenings, evening art and science events for adults, plus much more. We also create professional development programs for educators, and are at the forefront of changing the way science is taught. We share our exhibits and expertise with museums worldwide.

Curious? Dive into [Our Story](#).



[Changing the Way Science Is Taught](#)
 Offering authentic science experiences



[Online Engagement](#)
 Engaging with online audiences since 1993



[Advancing Ideas about Learning](#)
 Changing the way the world learns

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Museum Galleries

Osher West Gallery: Human Phenomena

South Gallery: Tinkering

Bechtel Central Gallery: Seeing and Listening

East Gallery: Living Systems

Fisher Bay Observatory Gallery: Observing Landscapes

North Gallery: Outdoor Exhibits

Museum Galleries

The Exploratorium has six main galleries, each focused on a different area of exploration. Common to all are interactive exhibits that reward your attention and give you much to think about. Indulge your curiosity and ask your own questions as you play with the exhibits, and discover new ways to understand how our world works.

The galleries share the floor with our [Exhibit Workshop](#), where our exhibits are researched, developed, and fabricated.



[Museum Visitor Map \(pdf\)](#)

Download our visitor map to learn about our galleries and content areas.

Museum Galleries



[South Gallery: Tinkering](#)

Think with your hands and explore your creativity.



[East Gallery: Living Systems](#)

Investigate the living world.



[Osher West Gallery: Human Phenomena](#)

Experiment with thoughts, feelings, and social behavior.



[Bechtel Central Gallery: Seeing and Listening](#)

Experiment with light, vision, sound, and hearing.



[North Gallery: Outdoor Exhibits](#)

Explore winds, tides, and natural phenomena.



[Fisher Bay Observatory Gallery: Observing Landscapes](#)

Uncover the history, geography, and ecology of the Bay Area.

Gallery Highlights



[Tactile Dome](#)

Take an interactive excursion through total darkness.



[The Karbar Forum](#)

Experience our state-of-the-art venue for films, music, and more.



[Works on View](#)

Artworks currently on display—and where to find them.

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education

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- Community Programs
 - High School Explainer Program
 - Xtech
 - Community Educational Engagement
- Tools for Teaching & Learning
 - Apps
 - Websites & Videos
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Education

The Exploratorium is the global leader in informal education, igniting curiosity and inspiring creativity in people of all ages. Our mission is to change the way the world learns, creating innovative learning environments, enthusiastic leaders, and new knowledge for teacher professional development.

Advancing Ideas about Learning

At the Exploratorium, we view learning broadly and believe there are different ways of learning and knowing: through direct experience with phenomena, through art, through dialogue, and through tinkering. We work to change the way the world learns and to promote equal access to these powerful ways of learning about the world.

Relating Research to Practice
Making educational research available to informal educators.

Visitor Research and Evaluation
Research about learning in informal environments.

Center for Informal Learning in Schools
Research and leadership programs

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Artist-in-Residence Program

Since its inception in 1974, the Exploratorium's Artist-in-Residence Program (AIR) has grown to include hundreds of artists and performers. The museum works with individuals and artist groups who are drawn to collaboration, interested in interdisciplinary dialogue, and open to developing new working methods. Projects have taken countless forms, such as multimedia performances, theatrical productions, animated filmmaking, immersive installations, walking tours, and online projects. The program allows for artists to embed within the unique culture of the institution, affords access to a dynamic and diverse staff, and provides opportunities for cross-pollination with a broad public. While the museum allows room for variance, residencies typically unfold over two years and include both an exploratory and project-development phase.

Please note: The Exploratorium A.I.R. program does not accept unsolicited artist materials.

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Ongoing Events and Series



After Dark
Treat your curiosity to cool Thursday evening events.



Pairings: Cultivating a Taste for Science Through Food
Robust presentations and refreshing conversations to inspire your scientific palate.



May Is for Members
Take advantage of exclusive member-only offers this May.



Fog Bridge #72494
An outdoor artwork by Fujiko Nakaya shrouds visitors in fog.

Upcoming Events Calendar



**Conversations About Landscape
Design Dialogue: Preparing for Sea Level Rise in the Bay Area**

Wednesday, May 11, 2016 • 6:00-8:30 p.m.

Join a conversation about how designers are helping to envision solutions to sea level rise for the Bay Area.

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education

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Teacher Institute

Institute for Inquiry

Field Trip Explorer Program

Learning About Learning

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Center for Informal Learning in Schools

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Xtech

Community Educational Engagement

Tools for Teaching & Learning

Apps

Websites & Videos

Digital Library

Learning Commons

Publications



About the High School Explorer Program

High School Explainers, the Exploratorium's youngest employees, are a diverse group of students who engage visitors at exhibits, lead demonstrations, and run many museum operations. Some are interested in science, all have a spark for learning new things. In keeping with the Exploratorium's philosophy, they build their own skills while learning to help others.

[High School Explorer Website](#) →

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Mission

The Exploratorium is a public learning laboratory exploring the world through science, art, and human perception. Our mission is to create inquiry-based experiences that transform learning worldwide. Our vision is a world where people think for themselves and can confidently ask questions, question answers, and understand the world around them. We value lifelong learning and teaching, curiosity and inquiry, our community, iteration and evidence, integrity and authenticity, sustainability, and inclusion and respect.

Overview

After 44 years at the Palace of Fine Arts the Exploratorium made a historic move, opening its new home in April 2013 at Pier 15 in the heart of San Francisco's vibrant waterfront district. The museum's new 330,000 sq. ft. facility provides three times more space than the original Palace of Fine Arts location, creating new opportunities to support the Exploratorium's culture of curiosity, experimentation, and collaboration. In its first year at Pier 15 the museum served 1.1 million visitors from across the globe, twice the attendance at its previous location.

- More than 600 exhibits created by staff scientists, artists and designers—new exhibits always in development
- 6 main exhibit galleries with exhibits in free, public space; 200-seat theater; life sciences laboratory; wired classrooms and labs; machine, wood, and electronics shops, a restaurant and a café
- Received LEED® Platinum certification in 2014, another key step toward the goal of being the first net-zero energy museum in the U.S., if not the world
- More than 200 High School Explainers help guests discover scientific phenomena

Exploratorium as a World Leader

The Exploratorium is among the most well-known and effective nonprofits, unparalleled as a world leader for innovation in education during its 45-year history. The Exploratorium encourages imitation, promotes process over product and considers questions as important as answers.

- 80 percent of the world's science centers use Exploratorium-designed exhibits, programs or ideas
- 200 million people engage with Exploratorium exhibits and experiences every year at science centers and other locations worldwide
- Ranks fifth-highest equity brand among museums worldwide, after the Louvre, Getty, Smithsonian, and the Metropolitan Museum of Art
- 11 million visits to www.exploratorium.edu annually to view the 50,000 pages of original content
- 60,000 Facebook fans, 53,500 Twitter followers, and 136,000 on Tumblr
- Exploratorium Global Studios works on master planning, program development and exhibit fabrication projects across the globe—from Arkansas to Abu Dhabi
- 75 live webcasts, videos and other media produced each year by the Exploratorium Moving Images team

Education and Research

The Exploratorium's learning group creates inquiry-based learning opportunities for students of all ages, provides effective teacher professional development, and disseminates learning and teaching strategies.

- More than 500 educators participate in on-site Exploratorium Teacher Institute programs every year
- The Institute for Inquiry, which has served 6,600 educators since 1995, instructs K-5 science teachers in Sonoma, California, to provide discussion-rich lessons that help English learners improve science and English skills simultaneously
- In their initial run, two Exploratorium Coursera courses (Tinkering Fundamentals and Re-Engineering Your Science Curriculum) reached over 10,000 participants from around the globe
- A recent partnership with Khan Academy introduced Exploratorium Teacher Institute content to more than 100,000 users, resulting in a 200% increase in video views
- 2,000 children and families engage in free science experiences through Community Educational Engagement
- After-School Tinkering and XTech teach more than 250 students 21st century skills
- Nationally recognized research and evaluation group with 7 staff members, including 3 Ph.D.s.
- Wired pier monitors on Pier 15, the roof, and under water capture weather patterns, bay currents, and air quality data for researchers at UC Berkeley, Romberg Tiburon Center, and NOAA

Budget and Staff

- 2014-15 operating budget \$50,000,000.
- 401 full time equivalent employees with a commitment to diversity; 24 Ph.D.s.

Exploratorium (EXPLO) 2016c



39 people like this. Sign Up to see what your friends like.

HIGH SCHOOL EXPLAINERS

Who are the High School Explainers, what do they do, and why is the experience life changing for so many of them?

WHAT ARE THE EXPLAINERS?



High School Explainers, the Exploratorium's youngest employees, are a diverse group of students who engage visitors at exhibits, lead demonstrations, and run many museum operations.

Some are interested in science, all have a spark for learning new things. In keeping with the Exploratorium's philosophy, they build their own skills while learning to help others.

[Learn more about the program.](#)

WHAT DO THEY DO?



Explainer-made videos offer a behind-the-scenes look at their daily demos and projects.

[Learn more about what they do.](#)

HEAR THE STORIES



"It's been life changing in ways I didn't think it would be."—Clare

[Hear more stories.](#)

Connect with Explainers YouTube Flickr Facebook Twitter

[Learn how to apply.](#)

Exploratorium (EXPLO) 2016d



HIGH SCHOOL EXPLAINERS

[What's an Explainer?](#) [What do they do?](#) [Hear their stories.](#)

PROGRAM OVERVIEW

[Program Overview](#) [Facts and Figures](#) [History and Alumni](#) [How to Apply](#) [Job Description](#)

High School Explainers, the Exploratorium's youngest employees, are a diverse group of students who engage visitors at exhibits, lead demonstrations, and run many museum operations. Some are interested in science: all have a spark for learning new things. In keeping with the Exploratorium's philosophy, they build their own skills while learning to help others.

The High School Explorer Program makes students part of the museum staff, giving them the important responsibility of being the museum's primary point of contact with visitors. The Explainers learn about exhibits and facilitate visitor-exhibit interactions; open and close the museum; run daily demonstrations (including cow's eye, heart, and flower dissections); find lost children; evacuate the museum during emergencies; and more.

Three groups of High School Explainers fill over 130 paid positions a year. More than 3,500 students have participated in the program since its inception in 1969, when the Exploratorium first opened.

Explainers are trained in a variety of subjects and are given a lot of responsibility for handling complex interactions and museum operations. Two or three times a week, they meet with science educators, exhibit builders, and other staff. They're trained in many subjects and are given a lot of responsibility for handling complex interactions and museum operations. The training is focused both on science content and exhibit facilitation. As part of museum operations, Explainers also learn how to effectively respond to visitors' needs and safety.

Explainer diversity is a crucial part of the program and one of its greatest strengths. Each group of Explainers is comprised of teens who are very different from each other. They come from a variety of cultures, sexual orientations, and ethnic, socioeconomic, and religious backgrounds, reflecting the population of the Bay Area. This diversity offers an enriched learning environment where teens can explore science, gain job skills, and learn how to work with people they might not otherwise meet.

For many students, this work-based learning program is a first-time work experience. Their interests vary. Some Explainers are knowledgeable in the sciences while others have strong skills in dealing with the public. The program directors look for students who have a spark for learning new things and a desire to work with people.



Connect with Explainers



[Learn how to apply.](#)

Appendix 52: Silicon Valley Community Foundation (SVCF) 2014



The screenshot displays the Silicon Valley Community Foundation (SVCF) website. At the top left is the SVCF logo, which consists of a stylized circular emblem followed by the text "SILICON VALLEY community foundation®". To the right of the logo is a search bar with a magnifying glass icon and the word "Search". Below the logo and search bar are navigation links: "Who We Are", "Community Impact", and "Our Scholars". A dark horizontal bar contains four menu items: "NONPROFITS", "INDIVIDUALS & FAMILIES", "CORPORATIONS", and "ADVISORS". Below this bar is a breadcrumb trail: "Home » Who We Are » About SVCF". The main heading "About SVCF" is prominently displayed. Below the heading is a black and white photograph of three women in a social setting, smiling and talking. One woman on the left is wearing a white jacket, the woman in the center is wearing a dark top and a name tag, and the woman on the right is wearing a patterned top and holding a drink. In the background, other people and a sign with the word "Print" are visible.

Silicon Valley Community Foundation is a comprehensive center of philanthropy. With visionary leadership, strategic grantmaking and world-class expertise, we partner with donors to strengthen the common good locally and throughout the world.

Appendix 53: The San Francisco Foundation (TSSF) 2016



ABOUT TSFF



The San Francisco Foundation is an incubator for community investment, original ideas, and passionate leadership. Since 1948, we have been bringing together networks of philanthropists and civic leaders to support and build on the strengths of the community and make the Bay Area the best place it can be.

We are a leading agent of Bay Area philanthropy. We rank among the nation's largest community foundations in grantmaking and assets. We cultivate a family of donors sharing a commitment to the Bay Area. Together, we give millions of dollars a year to foster strong communities, respond to local needs, and elevate public awareness.

Appendix 54: Gordon and Beth Moore Foundation (GBMF) 2016



Gordon and Betty Moore are committed to strategic philanthropy in the community that they call home—the San Francisco Bay Area. Their decision to support conservation and science and technology learning museums reflects how their family values the environment and prioritizes a commitment to excite people about science.

PROGRAM AREA

San Francisco Bay Area

TOTAL NUMBER OF GRANTS

180

Appendix 55: City Town Info 2016





Cities & Towns
Colleges & Careers
Career Details
Online Colleges
QuickSchools™

You are visiting:
[Home](#) > [All States](#) > [California](#) > [San Francisco](#) > [Colleges](#)

MATCHING SCHOOL AD



The Art Institutes™
CREATIVITY for LIFE

Do what you love, for life

We believe creativity is more than just a word. It's a passport to a life less ordinary. Here, we live for creativity. And we provide you with guidance, technology, creative focus and career advice so you can do what you love, for life.

EXPLORE YOUR OPTIONS

San Francisco Colleges, Universities, Trade and Vocational Schools

San Francisco Colleges and Schools

Colleges in San Francisco, California

There are at least 23 colleges in San Francisco, listed and described below. These schools represent 105,015 or more students (full-time and part-time), a combined student body equivalent to 67,139 full-time students, and a reported 7,977 dorm rooms.

The largest schools here include City College of San Francisco, San Francisco State University, Academy of Art University and University of San Francisco.

We also provide an extensive list of [California Colleges](#).

Of Note For College Students

- San Francisco is notable for the large percent of its residents with college degrees.
- There are a lot of studio and one-bedroom apartments in San Francisco.
- Housing and buildings in San Francisco tend to be older than other areas.
- A lot of people walk and bicycle in San Francisco.

Featured Colleges in the San Francisco Area (QuickSchools™)

We call these QuickSchools – Our term for schools with flexible schedules, simple applications, online info request forms, and very rapid response to requests for info.

Matching School Ads

The Art Institutes system of schools
San Francisco, CA

With an education from an Art Institutes school, imagine what you could create.

Visit www.artinstitutes.edu

- **Program Categories:** Art and Design, Culinary Arts
- **Degrees:** Associate, Bachelor



The Art Institutes™

Visit School Site

ITT Technical Institute
Oakland, CA



Find a school near you

Your Zip Code:

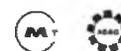
Subject:

Degree:

Online
 Campus
 Both

Submit

Appendix 56: Bay Area Census 2016


[Home](#) | [Contact](#)
[California](#) | [Bay Area](#) | [Counties](#) | [Cities](#) | [Tracts/Blocks](#)
[Transportation](#) | [Historical Data](#) | [Maps](#) | [Links](#) | [FAQ](#)

San Francisco Bay Area

Decennial Census data

[1860-1940](#) | [1950-1960](#) | [1970-1990](#) | [2000-2010](#)
[More Census Bureau data here](#)

	Census 2000		Census 2010		2006-2010 ACS*	
TOTAL POPULATION	6,783,760	100.0%	7,150,739	100.0%	7,002,425	100.0%
In households	6,640,972	97.9%	7,003,059	97.9%		
In group quarters	142,788	2.1%	147,680	2.1%		
RACE						
White	3,941,687	58.1%	3,755,823	52.5%		
Black or African American	511,084	7.5%	481,361	6.7%		
American Indian and Alaska Native	43,529	0.6%	48,493	0.7%		
Asian	1,289,849	19.0%	1,664,384	23.3%		
Native Hawaiian and Other Pacific Islander	36,317	0.5%	44,386	0.6%		
Some other race	627,004	9.2%	770,820	10.8%		
Two or more races	334,290	4.9%	385,472	5.4%		
HISPANIC OR LATINO AND RACE						
Hispanic or Latino (of any race)	1,315,175	19.4%	1,681,800	23.5%		
Not Hispanic or Latino	5,468,585	80.6%	5,468,939	76.5%		
White	3,392,204	50.0%	3,032,903	42.4%		
Black or African American	497,205	7.3%	460,178	6.4%		
American Indian and Alaska Native	24,733	0.4%	20,891	0.3%		
Asian	1,278,515	18.8%	1,645,872	23.0%		
Native Hawaiian and Other Pacific Islander	33,640	0.5%	41,003	0.6%		
Some other race	18,451	0.3%	20,024	0.3%		
Two or more races	223,837	3.3%	248,268	3.5%		
SEX						
Male	3,379,089	49.8%	3,543,908	49.6%		
Female	3,404,671	50.2%	3,606,831	50.4%		

Appendix 57: SFHIP 2016

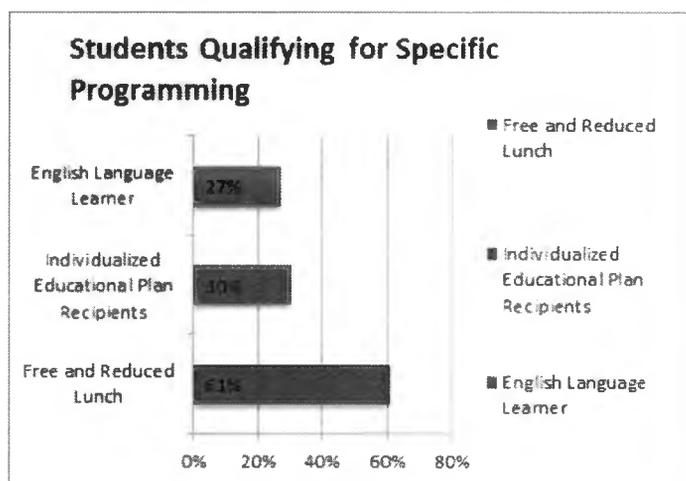
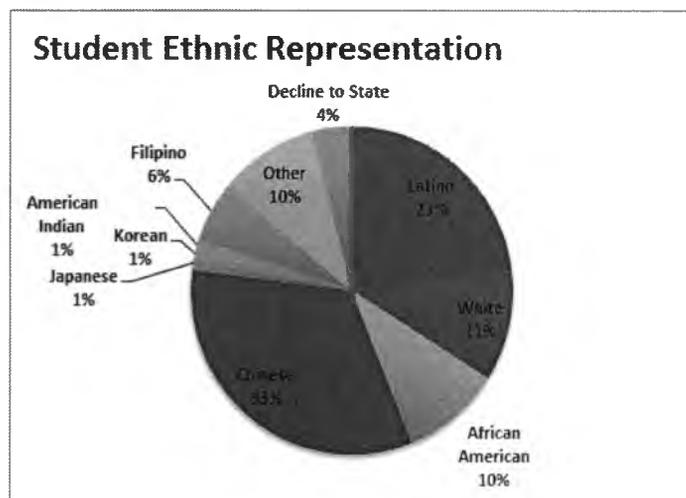
2016 Population by Age

Category	San Francisco	California
0 - 4	37,788 (4.36%)	2,533,458 (6.44%)
5 - 9	35,567 (4.11%)	2,569,802 (6.53%)
10 - 14	29,782 (3.44%)	2,577,307 (6.55%)
15 - 17	17,739 (2.05%)	1,616,241 (4.11%)
18 - 20	22,978 (2.65%)	1,661,543 (4.22%)
21 - 24	33,608 (3.88%)	2,280,863 (5.80%)
25 - 34	186,395 (21.53%)	5,686,512 (14.45%)
35 - 44	141,249 (16.31%)	5,260,788 (13.34%)
45 - 54	121,527 (14.03%)	5,239,945 (13.31%)
55 - 64	107,294 (12.39%)	4,704,721 (11.95%)
65 - 74	72,672 (8.39%)	3,037,755 (7.72%)
75 - 84	39,099 (4.52%)	1,516,474 (3.85%)
85+	20,215 (2.33%)	681,264 (1.73%)

Appendix 58: San Francisco Unified School District (SFUSD) 2016a

Our Students

SFUSD has a diverse population of 56,000 students. There are 44 documented languages spoken by our students and 26.5% speak English as a second language.



San Francisco Unified School District (SFUSD) 2016b

Our District

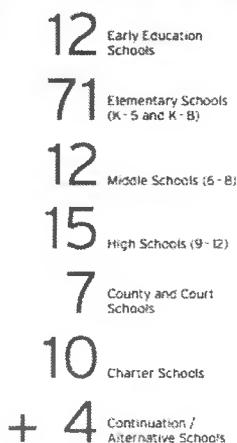
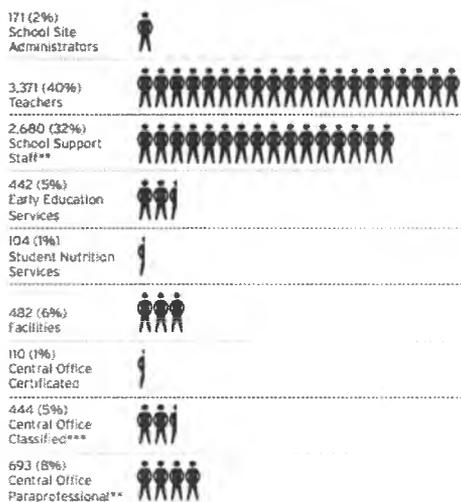
The San Francisco Unified School District ("SFUSD" or the "District"), founded in 1851, educates more than 53,000 of San Francisco's pre-K, kindergarten, elementary, middle, and high school age children through a network of 131 pre-K - 12 schools located throughout the 49 square mile area of the City and County of San Francisco.

Almost 53,000 Pre-K-12 Students*



SFUSD Employees

San Francisco is both a city and a county; therefore, SFUSD's 8,497 FTEs administer both the School District and the San Francisco County Office of Education. This makes SFUSD a "single-district county."



Board of Education

SFUSD is governed by an elected seven-member Board of Education:

Rachel Norton, President	Hydra B. Mendoza, Commissioner
Sandra Lee Fewer, Vice President	Dr. Emily M. Murase, Commissioner
Matt Haney, Commissioner	Jill Wynns, Commissioner
Kim-Shree Maulas, Commissioner	

131 Schools

*Data Source: CBEDS Oct. 2012

**School Support Staff include counselors, social workers, nurses, family liaisons, IRFs, therapy coordinators, psychologists, security guards, clerks, etc.

***Central Office Classified and Paraprofessional FTE totals include positions that are centrally assigned to schools

San Francisco Unified School District (SFUSD) 2016c

The City as Classroom

In 2025, learning isn't confined to classrooms but extends seamlessly into the dynamic city—and the wider world—that surrounds them. San Francisco has become a fully networked ecosystem of learning where education happens everywhere, in both formal and informal learning environments.

Carefully curated partnerships between the District, the city, local institutions, and local businesses (chosen both for their commitment to helping SFUSD students achieve Vision 2025 outcomes and for their diversity along socioeconomic, racial, ethnic, and linguistic lines) create an evolving array of opportunities for students to enhance their in-school experiences with new kinds of out-of-school, hands-on learning. The citywide learning network also offers students opportunities to demonstrate—and get credit for—mastery of skills and competencies that are harder to learn in a classroom setting.

Museums, parks, libraries, arts centers, entrepreneurial startups, and established businesses offer internships, apprenticeships, and other experiential learning opportunities that expose students to new areas of knowledge, tie academic and practical experience together, and enable SFUSD students to get pre-professional experience in their areas of interest. A student might learn the physical and mathematical basis of engineering in a formal learning experience, then use that information in a real-world setting, helping to develop smart buildings or robotic devices. Biology and biotechnology might be applied in a hospital setting, a commercial kitchen, or a research lab. Liberal and studio arts might be explored through developing museum exhibits, creating public art projects, or helping to stage professional productions.

These experiences offer support, mentorship, and feedback that galvanize progress for students who might otherwise struggle to identify their “spark” or see their future path—or, for that matter, the

real-world relevance of certain subjects. They also help students develop the tools and the skills to understand their career options and move seamlessly into a workplace to earn a living wage. As a result, there is a significant uptick in the number of SFUSD graduates hired (or sponsored through college with the promise of later employment) by local organizations. Additionally, an increased emphasis on the practical application of science, technology, engineering, math, and the arts has greatly increased the number of students who pursue careers or higher degrees in these subjects.

Opening the walls of the classroom also enables students to spend more active time outdoors, participating in activities that support both their physical and mental health and expand their engagement in the local environment. Students might regularly participate in beach cleanups, park improvement efforts, urban tree planting, and other service-oriented activities that get their bodies moving while also activating their sense of civic involvement.



Vision 2025
Students—The Classroom—The City
Teachers—Parents—Communities
Culture—Turning—Target Groups

San Francisco Unified School District | The Vision Process

San Francisco Unified School District | The Vision Process

San Francisco Unified School District | The Vision Process

Appendix 59: de Young (DY) 2010a

de Young

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FAMSF Board of Trustees

"The Board is responsible for the protection and conservation of the assets of the Fine Arts Museums and for setting the public course the Museums will follow. The Board shall assure that the Museums are open, accessible and vital contributors to the cultural life of the City and County, and that the Museums' programs bring art appreciation and education to all the people of the City and County."

—San Francisco City Charter, Section 5.10

Contact Information

Megan Bourne, Secretary to the Museums
mbourne@famsf.org

Golden Gate Park | 50 Hagiwara Tea Garden Drive
San Francisco, CA 94118 | 415.750.3600

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Fine Arts Museums of San Francisco
de Young
Legion of Honor

de Young (DY) 2010b

de Young

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HOME | ABOUT | ABOUT THE DE YOUNG



Founded in 1895 in San Francisco's Golden Gate Park, the de Young Museum has been an integral part of the cultural fabric of the city and a cherished destination for millions of residents and visitors to the region for over 100 years.

On October 15, 2005, the de Young Museum re-opened in a state-of-the-art new facility that integrates art, architecture and the natural landscape in one multi-faceted destination that will inspire audiences from around the world. Designed by the renowned Swiss architecture firm Herzog & de Meuron and Fong & Chan Architects in San Francisco, the new de Young provided San Francisco with a landmark art museum to showcase the museum's priceless collections of American art from the 17th through the 20th centuries, Textile arts, and art of Africa, Oceania, and the Americas.



de Young (DY) 2010c

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de Young

VISIT EXHIBITIONS COLLECTIONS LEARN GIVE & JOIN SHOP

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Site-specific Art Commissioned for the de Young

The de Young has commissioned several leading contemporary artists, including Gerhard Richter, James Turrell, Andy Goldsworthy, and Kiki Smith to create site-specific works for the new building.

For the de Young German artist Gerhard Richter has produced a large-scale mural from digitally manipulated photographs that together form a geometric black-and-white motif. The monumental piece, titled *Strontium*, is constructed of 130 digital prints mounted on aluminum with Plexiglas coating. It is installed in Wilsey Court, the central public gathering space of the new de Young.

California artist James Turrell has created a "Skyspace" for the museum's Barbro Osher Sculpture Garden. *Three Gems*, Turrell's first "Skyspace" in the form of a stupa or dome, is built into a hill within the garden and features a view of the sky altered by lighting effects that will change with light and weather conditions outside.

A third commission by Andy Goldsworthy takes its inspiration from the unique character of California's tectonic topography. Goldsworthy has created a continuous crack running north from the edge of the Music Concourse roadway in front of the museum, up the main walkway, into the exterior courtyard, and to the main entrance door. Along its path, this crack bisects -- and cleaves in two -- large rough-hewn stone slabs that serve as seating for museum visitors.

Kiki Smith's large-scale sculpture, a gift of Dorothy and George Saxe and the Friends of New Art, reinterprets David, Joanna, and Abigail Mason (1670) attributed to the Freahe-Gibbs Painter from the de Young's American Paintings Collection. Elements of the piece also evoke the unconventional layout and dramatic copper skin of new de Young.

de Young (DY) 2010d

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de Young

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Architecture and Grounds

Location

The de Young Museum is located at 50 Hagiwara Tea Garden Drive in Golden Gate Park. [Click here for a map.](#)



The Architects

- **Primary Designer:**
Herzog & de Meuron, Basel, Switzerland, and San Francisco, California
- **Principal Architects:**
Fong & Chan Architects, San Francisco, California
- **Landscape Architect:**
Walter Hood, Hood Design, Oakland, California
- **Contractor:**
Swinerton and Walberg Builders

Major Design Features

Constructed of warm, natural materials including copper, stone, wood and glass, the new de Young blends with and complements its natural surroundings. Ribbons of windows erase the boundary between the museum interior and the lush natural environment outside, and four public entrances segue naturally from the park's pathways, welcoming visitors from all directions.

The building's dramatic copper facade is perforated and textured to replicate the impression made by light filtering through a tree canopy, creating an artistic abstraction on the exterior of the museum that resonates with the de Young's tree-filled park setting. The building's copper skin, chosen for its changeable quality through oxidation, will assume a rich patina over time that will blend gracefully with the surrounding natural environment.

The northeast corner of the building features a 144-foot tower that gently spirals from the ground floor and aligns at the top with the grid formed by the streets of the Richmond and Sunset neighborhoods surrounding the park. A public observation floor offers panoramic views of the entire Bay Area.

Landscape Design

The outdoor environment of the new de Young features a public sculpture garden and terrace beneath a cantilevered roof; a children's garden; and landscaping that creates an organic link between the building and the surrounding environment on all four sides. The landscape design integrates historic elements from the old de Young—including the sphinx sculptures, the Pool of Enchantment, and the original palm trees—as well as sandstone, redwood, ferns and other plants and materials relevant to the site, creating a museum that is permeable, open, and inviting to the public.

de Young (DY) 2011a

FINE ARTS MUSEUMS OF SAN FRANCISCO [Legion of Honor](#) | [Towers](#) | [Cronin](#) | [Abo](#) | [Metcalf](#) | [Explore the Art](#) | [SEARCH](#)

de Young

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Hours & Admission

HOME | ABOUT HISTORY OF THE DE YOUNG MUSEUM

Getting to the de Young

History of the de Young Museum

About the de Young

The de Young Museum originated as the Fine Arts Building, which was constructed in Golden Gate Park for the California Midwinter International Exposition in 1894. The chair of the exposition organizing committee was Michael H. de Young, co-founder of the San Francisco Chronicle. The Fine Arts Building was designed in a pseudo-Egyptian Revival style and decoratively adorned with images of falcons, the sun goddess. Following the exposition, the building was designated as a museum for the people of San Francisco. Over the years, the de Young has grown from an attraction originally designed to temporarily house an eclectic collection of exotic oddities and curiosities to the foremost museum in the western United States concentrating on American art, international textile arts and costumes, and art of the ancient Americas, Oceania and Africa.

History of the de Young

The new Memorial Museum was a success from its opening on March 24, 1896. No admission was charged, and most of what was on display had been acquired from the exhibits at the exposition. Eleven years after the museum opened, the great earthquake of 1906 caused significant damage to the Midwinter Fair building, forcing a year-and-a-half closure for repairs.

Architecture + Grounds

Before long, the museum's steady development called for a new space to better serve its growing audiences. Michael de Young responded by planning the building that would serve as the core of the de Young Museum facility through the 20th century. Louis Oldeman Hubbard, the coordinator for architecture for the 1915 Panama-Pacific Exposition, designed the Spanish-Plateresque-style building. It was completed in 1919 and formally transferred by de Young to the city's park commissioners. In 1921, de Young added a central section, together with the tower that would become the museum's signature feature and the museum began to assume the basic configuration that it retained until 2001. Michael de Young's great efforts were honored with the changing of the museum's name to the M. H. de Young Memorial Museum. Yet another addition, a west wing, was completed in 1925, the year de Young died. Just four years later, the original Egyptian-style building was declared unsafe and demolished. By the end of the 1940s, the elaborate cast concrete ornamentation of the original de Young was determined to be a hazard and removed because the salt air from the Pacific had rusted the supporting steel.

Site-specific Commissions

In the mid-1950s, following Avery Brundage's bequest of his magnificent Asian art collection, the Brundage wing was constructed, thereafter altering the museum's orientation toward the Japanese Tea Garden; another remnant of the 1906 Midwinter Fair. In 1994 city voters overwhelmingly supported a bond measure to renovate the former San Francisco Main Library as the new home of the Asian Art Museum. Architect Gae Aulenti—widely recognized for adapting historic structures into museum spaces—was chosen as the design architect for the new facility. The Asian art collection remained open to the public at the de Young until October 2001, when it closed in preparation for the move. In November 2003 it re-opened its doors to the public at its new Civic Center location as an independent museum.

Run the de Young

In 1969 the de Young suffered significant structural damage as a result of the Loma Prieta earthquake. The Fine Arts Museum's board of trustees completed a project that braced the museum as a temporary measure until a long-term solution could be implemented. For the next several years, the board actively sought solutions to the de Young's structural jeopardy and solicited feedback from throughout the community, conducting numerous visitor surveys and public workshops.

Group Visits

With extensive public input, the board initiated a process to plan and build a privately financed institution as a philanthropic gift to the city, in the tradition of M. H. de Young. An open architectural selection process took place from 1998 to 1999. The board endorsed a museum concept plan in October 1999, and a successful multi-million-dollar fundraising campaign was initiated under the leadership of board president Dame B. Wiley.

Tours

The resulting design by the Swiss architectural firm Herzog & de Meuron weaves the museum into the natural environment of the park. It also provides open and light-filled spaces that facilitate and enhance the art-viewing experience. Historic elements from the former de Young, such as the Schreier, the original palm trees, and the Pool of Enchantment, have been retained or reconstructed at the new museum. The former de Young Museum structure closed to the public on December 31, 2000. The new de Young opened on October 15, 2005.

Museum Policies

According to The Art Newspaper (April 2012), the new museum is the most visited art museum west of the Mississippi, the sixth most visited art museum in North America, and the 35th most visited in the world. Housed in a state-of-the-art, accessible, and architecturally significant facility, it provides valuable art experiences to generations of residents and visitors.

Hours

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de Young (DY) 2011b

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Museum Ambassadors Classroom Visit and Gallery Tour

Schedule a Community Presentation and Tour

Click here to schedule a reservation

This award-winning outreach program is offered to San Francisco 3rd-5th grade classes. Teen student ambassadors from San Francisco Unified High Schools offer facilitated classroom visits and facilitated gallery tours to all San Francisco 3rd-5th grade students who attend public, private or parochial schools.

The Museum Ambassador Program is a two-part program. Teen Museum Ambassadors will visit classrooms or community centers to introduce a special exhibition or a part of the permanent collection with an interactive art activity. After the classroom visit students are invited to visit the de Young Museum for a tour given by the Museum Ambassadors. Interested teachers or group leaders should submit a reservation form by email only.

This academic year the program will focus on the New Guinea permanent collection at the de Young. The summer of 2016 will focus on the special exhibition, Ed Ruscha and the Great American West.

Become a Teen Museum Ambassador!

The Museum Ambassadors are recruited twice a year. Applications are available in September for the academic year program and in March/April for the summer program. Ambassadors are paid minimum wage. Museum Ambassadors are paid for training hours and for the presentations and tours exposed to students.

SFUSD High school students interested in the summer program should email

museumambassadors@sfamst.org or call 415.750.3523.



The Museum Ambassador Program is made possible with support from Bank of America, de Youngs, Pam Saring and Jeff Thomas, Cab Inc., Dr. Jessica and Jeffrey Gayral, Crestwood Porter Hebb Foundation, Kimball Foundation, the Marilyn Langer Memorial Fund, Mr. and Mrs. Garling M. Luster II, Mr. and Mrs. Gary H. Lauder, Mr. and Mrs. Andrew McKnight, Mr. and Mrs. Jason E. Mornet, Soto Foundation, Diane B. Wisny, and the Zalesbach Family Foundation.

de Young (DY) 2016a

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Founded in 1905, the de Young's original collections were born out of exhibitions featured in the 1904 California Midwinter International Exposition organized by M.H. de Young. Today, the de Young museum is home to one of the most diverse and significant art collections in the western United States. Currently the de Young's collection exceeds 27,000 works of art and is renowned for its holdings in American art of all periods, including painting, sculpture, decorative arts, and works on paper; the art of Africa, Oceania, and the Americas; and costumes and textiles representing a wide variety of Eastern and Western traditions.

Collections News & Noteworthy



April 12, 2016

"Theresa Gunnice" Alterations

In 2014, artist Jenise Turvall's 1949 conceptual work "Theresa Gunnice" was reworked by the Museum to review Theresa Gunnice, the "psychoanalyst" cited in a press-covered 1911 in the *San Francisco Chronicle*. The work was a response to the artist's earlier work, "Theresa Gunnice," which was a sculpture of the artist's mother, having been installed during the opening of the museum's new building in 2005. Turvall's work often challenges assumptions about women's art.

[Read more »](#)



March 23, 2015

Hiram Powers' Masterpieces Recently Acquired at the de Young

The Museum has acquired a two-thirds scale marble replica of the 1833 of the American sculptor Hiram Powers' *Theresa Gunnice*. The work is a reproduction of the 18th century British artist's original, a white Greek woman taken captive by London Ottomans during the Greek War of Independence (1821-1832) and publicly displayed for sale in a slave market.

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de Young (DY) 2016b

de Young

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Current Special Exhibitions



Oscar de la Renta: The Retrospective

Through May 30, 2016

Oscar de la Renta's designs celebrated the best in us—beauty, optimism, and confidence, including more than 130 ensembles, the world premiere retrospective pays tribute to one of the most beloved and influential fashion icons of our time. Learn more



Printed Stones

Through July 10, 2016

ANDERSON GALLERY 11



Bruce Davidson: Gifts to the Collection

Through September 11, 2016

GALLERY 12



The Sumatran Ship Cloth

Through February 12, 2017

GALLERY 31



Kay Sekomachi: Student, Teacher, Artist

Through November 5, 2016

78 WALKER TEXTILE GALLERY 10/PHILLIPS

de Young (DY) 2016c

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de Young

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The Fine Arts Museums of San Francisco offers a wide range of programs and educational opportunities that foster connections, expand knowledge, create community, and enable visitors of all ages to bring new perspectives to artworks in our permanent collection and special exhibitions. The Museums' Programs and Education initiatives partner with community groups, schools, city organizations, and advisory committees to engage multiple voices and diverse audiences in the Bay Area and beyond.



See live performances, check out the Artist Studio, supplement your visit with a lecture, and more.



Learn more about educational resources and opportunities for families, students, and educators.

Appendix 60: Virtual Museum of San Francisco 2016



Upload Your Resume

1000s of Employers Are Searching. Post Your Resume To Be Found.

DISAPPOINTMENT CREATED THE MUSEUM
IN GOLDEN GATE PARK

BY H.L. DE YOUNG
(Michael Harry de Young, 1849-1925)

You ask me to tell you something about the early history and other interesting points connected with the foundation of our Memorial Museum in Golden Gate Park. When I was a very young man I had a great desire to acquire curious things, especially antiques, and always felt that I would like to make a collection. I do not know just what inspired me in that direction, but I commenced by making a collection of stuffed birds. During a number of years, while a young man fighting the battle of life, I kept adding to this collection and secured a number of specimens that were extinct, which I thought an very valuable. I installed my birds in a room in my house, providing shelves and cases for them, and used to get a great deal of satisfaction inspecting them and showing them to my friends.



H. L. de Young

As the years rolled by my fad took another form, and one day I bought a large collection of Chinese wood carvings. The question then arose: Where shall I install them? As no place could be found in my house but the room where the birds were, out they went, and the room was devoted to the carvings and other objects harmonizing with them. It is still maintained, and my friends know it as the Chinese room. Then came the question of what to do with the discard. An elephant on one's hands is a troublesome thing, but it does not have much on a collection of birds which no one seemed to want. There was no place where I could present them. I went to see the Park Commissioners and asked if they would accept them as a donation to the park, but they replied that there was no suitable building or place to put them, and they declined with regret. Finally I put them up at auction because I could not keep them any longer, and they were sold, and after paying auctioneer's expenses, for the small sum of \$25. I have never forgotten that sale and the pang it gave me when I thought my little treasures were being thrown away.



Art Building in Golden Gate Park

A few years after this experience the Mid-Winter Exposition was launched and during its progress the desire to create a museum took possession of me, and I gave a great deal of study to the matter. I had repeated interviews with Mr. Stowe, president of the Park Commission, urging on him the desirability of such an institution. At first he seemed very fixed in his determination not to allow any of the Exposition buildings to be kept in the park. But I persisted and finally got his consent to keep the Art Building by impressing upon him that there was only one suitable place in San Francisco to establish a museum, and that was in Golden Gate Park, where the people could enjoy it on the days when they take their outing, when their families would visit the Art Building both for amusement and education.

I then turned my attention to the facilities afforded by the Mid-Winter Exposition and began to make purchases. The Exposition contained many beautiful things that had been specially made for the Columbian Exposition, among them the great Dove Vase, the Versailles Group, and other interesting exhibits. I also went East and purchased many other interesting objects that had been exhibited at the Chicago Exposition, and then in the year 1893, March 23, before a large gathering of interested people I formally presented the museum to the park with the understanding that it was to remain in Golden Gate Park under the title of the Memorial Museum and to be open free every day in the week. Its doors were then thrown open.

Subsequently, nearly every year, I took a trip to some part of the world and devoted part of my time to making purchases for the museum, spending each year a certain amount of my own money for that purpose. During the twenty-one years that I have been thus engaged I have managed to secure over 300,000 articles which are now on exhibition in the Memorial Museum. While abroad I consulted with various museum authorities, talking over the matter with them, obtaining a lot of information which came in very handy for me. I soon found out that the cost of making a collection could easily become something fabulous. I remember seeing one in Tiffany's, New York, wholly of knives and forks, for which they asked \$85,000; another of stirrups was valued at \$8,000.

I soon became convinced that to attempt to buy a ready-made collection would take millions, and after a great deal of thought I determined to do my own collecting, and during the past twenty years I have taken up different fads on each trip, and worked and worked patiently to complete the particular specialty. I made a collection of knives and forks that took me years to gather, and one of powder horns, picked up at different places all over the globe. The fans filling a number of cases in the present museum were assembled in the same way, as were also the guns and pistols, which were picked up one by one. I used to carry them with me on trains in my hand bag until I got to a place where I could slip them back to the museum.

It was most interesting work. I enjoyed it then, and I enjoy it now. I heard that art collectors were making a collection of docks of the Napoleonic period. I took the hint, I remember going around Paris one day, and kept at it until I bought seventeen docks. They were old docks, but not what you would call antiques, but still they were good examples of those used eighty or one hundred years ago.

Then I tried to pick up old furniture, but that was not so easy, but we have succeeded in making a nice collection interesting to every one. Later I took up the fad for jades, Chinese stuffed birds, jewelry, and precious stones. The museum now boasts of a collection of each. I started in on a collection of bronze medals of the popes and of the great churches. The museum now has a very fine collection of both. I never fail when I go to the museum to look at these things. I never see the magnificent collection without recalling the heart burns and the worries that I had trying to get many of these things and the fabulous prices asked for them. But the collecting instinct is mighty stimulating, and always waited to make a collection.

I remember making a collection of keys, and in doing so I suppose I spent more time and more thought trying to remember the keys I had bought so as to avoid duplicating them, than the collection might warrant, but the outcome certainly is a fine collection of keys. One part of it, that of Gold Chamberlain keys, is especially interesting, as they originally belonged to the petty German courts that now compose the great empires of Germany and Austria. During this present Exposition I was able to make numerous purchases, which have been added to the large collection already installed in the museum, which now ranks sixth in the United States.

One of the most interesting departments in the Memorial Museum, one which we may expect to expand greatly, is that devoted to the relics and the pictures of the pioneers of San Francisco and California generally. It is a collection that could not be bought, one that could only be assembled by a great deal of personal effort, in which the families of the pioneers are responding, presenting gradually to the museum objects which will one day make the collection a priceless one and the pride of the Golden State.

California Living
1916

Appendix 61: CCSF 2016

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CITY & COUNTY OF SAN FRANCISCO
Fine Arts Museums of San Francisco

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Appendix 62: SFRP 2016



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GOLDEN GATE PARK

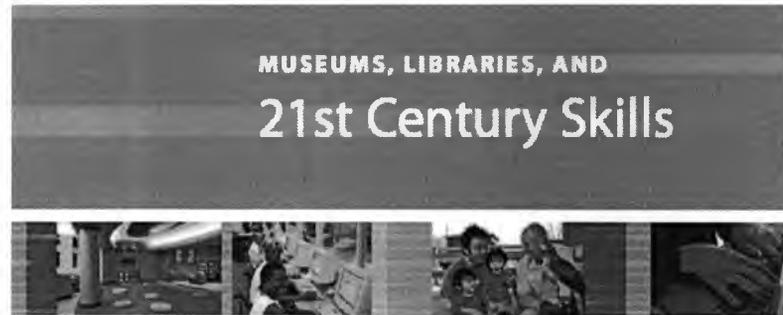


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We're proud to welcome more than 13 million visitors each year to Golden Gate Park, one of San Francisco's greatest treasures. From a vast, windswept expanse of sand dunes, park engineer William Hammond Hall and master gardener John McLaren carved out an oasis—a verdant, horticulturally diverse, and picturesque public space where city dwellers can relax and reconnect with the natural world. The rest, as they say, is history.

Within Golden Gate Park's 1,017 acres you'll discover gardens, playgrounds, lakes, picnic groves, trails, and monuments, plus an array of cultural venues, events, and activities. To help you plan your visit, we've highlighted just a few of the park's special features and activities below. For more information, stop by McLaren Lodge to pick up a map, get involved, and find out what's happening in San Francisco's backyard. For information about reserving facilities for picnics, athletic events, weddings, and special events, please contact our Permits & Reservations Division at (415) 831-5500.

Appendix 63: IMLS 2009, Cover Page



IMLS 2009, Table of Contents

01	About the Project	Institute of Museum and Library Services
02	Introduction	1800 M Street NW, 9th Floor Washington, DC 20036 (202) 653-IMLS (4657) www.imls.gov
05	Case Study: Good to Grow Initiative	
06	Libraries, Museums, and 21st Century Skills	
08	Case Study: Miami-Dade Public Library	IMLS will provide visually impaired or learning disabled individuals with an audio recording of this publication upon request.
10	Museums and Libraries in the 21st Century: New Contexts	Printed July 2009 in the United States of America
12	Case Study: Maine Memory Network	Library of Congress Cataloging in Publication Data may be found on inside back cover
14	The Pueblo of Pojopaque Public Library, Raising Readers Program	
15	Self-Assessment Tool for Museums, Libraries, and 21st Century Skills	
23	Skills Definitions	CREDITS
27	Case Study: Philadelphia Museum of Art	Produced by the IMLS Office of Strategic Partnerships under the direction of Marsha Semmel, Deputy Director for Museum Services and Director for Strategic Partnerships
28	21st Century Skills Action Agenda: Six Steps to Build Momentum	
30	Case Study: Skokie Public Library	
33	Case Study: New York Hall of Science	
34	Implications of this Report	
35	Conclusion	
36	Works Cited	

"Success in today's society requires information literacy, a spirit of self-reliance, and a strong ability to collaborate, communicate effectively, and solve problems. Combining strengths in traditional learning with robust investment in modern communication infrastructures, libraries and museums are well-equipped to build the skills Americans need in the 21st century" (IMLS 2009).

IMLS 2009, pg. 6

Libraries, Museums, and 21st Century Skills

The need to enhance 21st century skills is a compelling national imperative. Built on a foundation of deep content mastery, these skills are the new workforce requirements for maintaining U.S. global competitiveness and ensuring each person's personal and professional success.

Competencies like critical thinking, global awareness, and media literacy are no longer simply desirable—they are necessary. If 21st century skills are the new design specifications for national and individual success, our nation's libraries and museums are well-positioned to respond to this need.

Museums and libraries offer rich and authentic content, dedicated and knowledgeable staff with deep expertise, and safe, trusted settings for individuals and families, all of which invite and support effective learning. The collections in libraries and museums—books, artwork, scientific specimens, and other cultural artifacts—connect people to the full spectrum of human experience: culture, science, history, and art. By preserving and conserving our material and digital artifacts, libraries and museums link us with humankind's history. These institutions operate as places of social inclusion that promote curiosity, learning by doing, and discovery. In them, we learn about ourselves and others, and enhance the skills that contribute to empathy, tolerance, and understanding.

It is also worth noting that our nation's earliest libraries and museums helped Americans acquire skills that are today defined as "21st century skills"—such as critical thinking, problem solving, information literacy, and civic literacy, to name a few. But as the need for 21st century skills in our communities, workplaces and schools grows, all libraries and museums have a stake in re-imagining their future roles as learning institutions.

While it is true that libraries and museums are—and always have been—well-equipped to provide critical learning experiences to their audiences, this potential must be further developed, defined, and made more accessible. All libraries and museums—and the people they serve—stand to benefit from becoming more intentional and purposeful about accommodating the lifelong learning needs of people in the 21st century, and doing this work collaboratively in alignment with community needs.

Therefore, it is critical that we envision, define, and implement library and museum approaches that integrate 21st century skills in more tangible, visible ways. And as our society shapes its educational, technological, and economic policies, it needs to more intentionally call upon the trusted, welcoming, and content-rich settings of libraries and museums—institutions found in every community across America, to support the nation's development of 21st century skills.



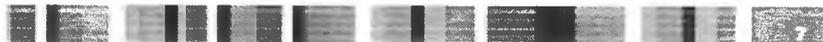
IMLS 2009, pg. 7

The 21st Century Museum/Library Shift

How should libraries and museums evolve as institutions of learning in the 21st century? In light of 21st century demands, libraries and museums should build on current strengths and embrace new approaches such as the ones described in the chart below:

20TH CENTURY MUSEUM/LIBRARY	21ST CENTURY MUSEUM/LIBRARY
Primarily content-driven	Combination of audience- and content-driven
Mostly tangible objects (art, books)	Combination of tangible and digital objects
One-way information (institution presents information to audiences)	Multi-directional (co-created experiences involving institution, audiences, and others)
Focus on presentation and display	Focus on audience engagement and experiences
Emphasis on enhancing knowledge	Emphasis on enhancing knowledge and 21st century skills
Acts independently	Acts in highly collaborative partnerships
Located in community (operates independently)	Embedded in community (aligned with and acts as a leader on community needs/issues)
Learning outcomes assumed, implied (content knowledge and skills like critical thinking tend to be byproducts of programming)	Learning outcomes purposeful (content knowledge and 21st century skills like critical thinking are visible, intentional outcomes of audience experiences)
Institution leads content development (content tightly edited and controlled)	Content co-created among diverse partners and audiences, accessible in multiple ways

All libraries and museums—and the people they serve—stand to benefit from becoming more intentional and purposeful about accommodating the lifelong learning needs of people in the 21st century, and doing this work collaboratively in alignment with community needs.



IMLS 2009, pg. 23

Skills Definitions

The IMLS Project Team and Task Force considered the list of skills commonly referred to as "21st Century Skills" and modified it slightly to better align with library and museum priorities.⁵

The resulting list includes the following additions: Basic Literacy, Scientific & Numerical Literacy, Visual Literacy, Cross-Disciplinary Skills, and Environmental Literacy.

Not every skill on this list will be aligned with every institution's vision and mission. Further, not every community will prioritize the same skills. Library and museum leaders should consider this list as a starting point beyond which it should be customized to fit the unique character, requirements, and priorities of the institution and its audiences.

⁵ Except as otherwise noted, the skills definitions are derived from the Partnership for 21st Century Skills Framework (www.21stcenturyskills.org).

Learning and Innovation Skills

CRITICAL THINKING AND PROBLEM SOLVING

Reason Effectively

- Use various types of reasoning (e.g., inductive, deductive, etc.) as appropriate to the situation

Use Systems Thinking

- Analyze how parts of a whole interact with each other to produce overall outcomes in complex systems

Make Judgments and Decisions

- Effectively analyze and evaluate evidence, arguments, claims and beliefs
- Analyze and evaluate major alternative points of view
- Synthesize and make connections between information and arguments
- Interpret information and draw conclusions based on the best analysis
- Reflect critically on learning experiences and processes

Solve Problems

- Solve different kinds of non-familiar problems in both conventional and innovative ways
- Identify and ask significant questions that clarify various points of view and lead to better solutions

CREATIVITY AND INNOVATION

Think Creatively

- Use a wide range of idea creation techniques (such as brainstorming)
- Create new and worthwhile ideas (both incremental and radical concepts)
- Elaborate, refine, analyze, and evaluate ideas in order to improve and maximize creative efforts
- Demonstrate imagination and curiosity

Work Creatively with Others

- Develop, implement, and communicate new ideas to others effectively
- Be open and responsive to new and diverse perspectives; incorporate group input and feedback into the work
- Demonstrate originality and inventiveness in work and understand the real world limits to adopting new ideas
- View failure as an opportunity to learn; understand that creativity and innovation is a long-term, cyclical process of small successes and frequent mistakes



Learning and Innovation Skills (continued)

Implement Innovations

- Act on creative ideas to make a tangible and useful contribution to the field in which the innovation will occur

COMMUNICATION AND COLLABORATION

Communicate Clearly

- Articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of forms and contexts
- Listen effectively to decipher meaning, including knowledge, values, attitudes, and intentions
- Use communication for a range of purposes (e.g., to inform, instruct, motivate, and persuade) and in diverse environments (including multi-lingual)
- Utilize multiple media and technologies and know how to judge their effectiveness a priori as well as assess their impact

Collaborate with Others

- Demonstrate ability to work effectively and respectfully with diverse teams
- Exercise flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal
- Assume shared responsibility for collaborative work, and value the individual contributions made by each team member

VISUAL LITERACY

- Demonstrate the ability to interpret, recognize, appreciate, and understand information presented through visible actions, objects and symbols, natural or man-made¹

SCIENTIFIC AND NUMERICAL LITERACY

- Demonstrate the ability to evaluate the quality of scientific and numerical information on the basis of its sources and the methods used to generate it
- Demonstrate the capacity to pose and evaluate scientific arguments based on evidence and to apply conclusions from such arguments appropriately
- Demonstrate ability to reason with numbers and other mathematical concepts

CROSS-DISCIPLINARY THINKING

- Apply knowledge, attitudes, behaviors, and skills across disciplines in appropriate and effective ways

BASIC LITERACY

- Demonstrate the ability to use language to read, write, listen, and speak

¹ Derived from definition attributed to John Debes, of the International Visual Literacy Association (www.vla.org.uk/vla/vla.htm).



Appendix 64: Art Education Partnership 2014, pg. 3

A SNAPSHOT OF STATE POLICIES FOR ARTS EDUCATION

The Arts as a Core Academic Subject

Defining the arts as a "core" or "academic" subject in state policy puts the arts on equal footing with other core subjects for support and assistance. In some cases, this status also allows the use of federal funds for arts education purposes. As of March 2014, 27 states defined the arts in this manner in state statute or administrative code.

The inclusion of the arts as a core or academic subject in state policy is also consistent with current federal education policy. The Elementary and Secondary Education Act (also known until its reauthorization as the *No Child Left Behind Act of 2001*) defines "core academic subjects" as "English, reading or language arts, math, science, foreign languages, civics and government, economics, arts, history and geography."

Current federal law does not include a definition of what the "arts" encompass as an academic discipline, which is also the case for most states with a policy in this area. The majority of the 27 states with the arts in their core subject definition refer to the arts in general terms,

such as "the arts," "the fine arts," or "the visual and performing arts." Only Georgia lists the four traditional arts disciplines of dance, music, theatre, and visual art in its statutory definition of core academic subjects.

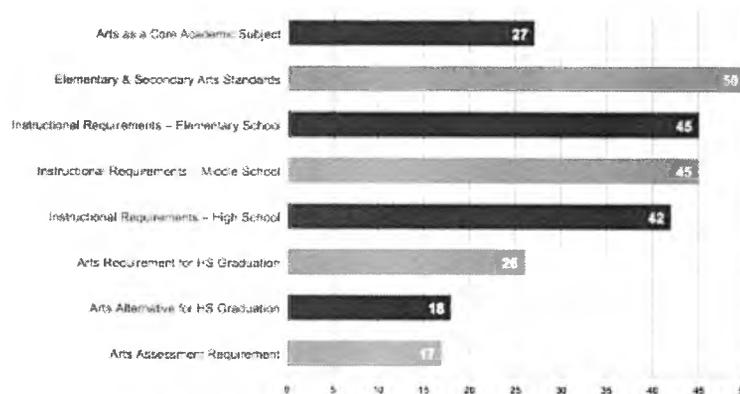
State Standards for Arts Education

In the early 1990s, states and the nation embraced the concept of standards—published statements that defined what students should know and be able to do in different subject areas at various points in their education—as the basis for education reform. Standards-based education continues to shape the structure and design of our nation's current education system. As part of the early "standards movement," discipline associations developed national standards for grade levels K-12, which, in some cases, served as the basis for the development and adoption of state standards.

In 1994, a consortium of organizations representing teachers of dance, music, theatre, and visual art published the *Voluntary National Standards for Arts Education* for those four arts disciplines. Although voluntary, the national standards provided guidance

SELECTED ARTS EDUCATION STATE POLICY AREAS

Number of States with Policies in Statute or Code



MARCH 2014

3

Art Education Partnership 2014, pg. 6



The actual wording used in state policy can matter greatly when interpreting whether instruction in the arts, especially at the elementary and middle school levels, is discretionary or mandatory. Consider the language differences of these state examples (emphasis added): "Each public school in the state *is strongly encouraged to provide* courses in visual arts and in performing art" (Colorado); "Instruction *must be provided* in at least the following subject areas...basic communication skills including reading and writing, literature, and fine arts" (Minnesota); or "All public school students in each grade 1 to 6 *shall be enrolled* in a visual and performing arts program" (Delaware). The actual wording can mean the difference between simply ensuring that all students are provided with access to arts instruction versus ensuring that all students are required to receive arts instruction.

Arkansas' Act 245, passed in 2005, offers among the greatest specificity of any state for elementary level arts instruction. The law states, "every public elementary school in the state shall provide [weekly] instruction for no less than forty (40) minutes in visual art and no less than forty (40) minutes in music based on the state visual art and music frameworks." It also requires that every student in grades one through six "shall participate in the visual art and music class" and that instruction "shall be provided by a licensed teacher certified to teach art or music."

High School Graduation Requirements Pertaining to the Arts

Twenty-six states mandate that high school students obtain course credits (also commonly called Carnegie Units) in the arts as a requirement for graduation. Generally, one course credit or unit is equivalent to one academic year or two semesters. Most states with arts requirements for high school graduation specify that students acquire the equivalent of either one half-unit or one full unit in the arts. Many do not distinguish among arts disciplines, referring only to "the fine arts" or "visual and performing arts." Utah, however, requires high school students to take "1.5 units of credit from any of the following performance areas: visual arts, music, dance [and] theater"

Additionally, 18 states allow students to select from among a range of subjects, including the arts, to fulfill graduation requirements. Within the various electives, the arts are most often included with world languages or career and technical education. Other alternatives include competencies of speech (Oklahoma), R.O.T.C. training (North Carolina), and courses in world language, physical education or health, and/or technology (Rhode Island).

While difficult to determine exact numbers because of state level differences in postsecondary education structure and governance, individual colleges or systems of higher education in some states may require arts credits for admission to their respective institutions, although the requirement may not appear in state statute or code. The University of California and California State University Systems, along with public colleges and universities in Arizona, Minnesota, and South Carolina, are examples of statewide systems that require completion of one year of arts for admission. Connecticut is an example of a state that has taken a systemic approach, requiring one credit in the arts both for high school graduation and for admission to the Connecticut State University System.

Assessment and Accountability in the Arts

Current federal law requires states to use standardized assessments to test every student in mathematics and ELA in grades three through eight, and once in high school. Beyond these two subjects, it is left to the discretion of states to establish assessment policies and practices for other subjects. In addition to the statewide assessments required for mathematics and ELA, some states, like Kentucky, also require statewide assessments for science and social studies at designated grades. For subject areas not covered in a statewide assessment, states typically assign school districts broad responsibilities to develop and implement local assessments.

Seventeen states have policies in statute or code that pertain specifically to the assessment of student learning in the arts. Most require school districts to develop and implement ongoing assessments aligned

Appendix 65: Museum Teen Summit (MTS) 2016a

HOME **ABOUT** MISSION GALLERY CLASSIFIEDS TEAM CONTACT

ABOUT MUSEUM TEEN SUMMIT

HELLO, WHO IS THIS?

This is Museum Teen Summit, also commonly referred to as MTS or Teen Summit

WHAT IS MTS?

Museum Teen Summit is a collective of youth leaders who have participated in museum teen programs at different museums in the New York City area dedicated to improving and promoting the role of youth in the arts. Check our MISSION.

WHERE IS MTS?

Teen Summit is a nomadic organization. We're not based anywhere, but we travel to various cultural institutions by the week to work with education departments on teen programming.

WHAT DOES MTS DO?

We research, build communities, advise educators, host events, and present at conferences. For a full timeline of what we've done, check out our HISTORY.

MUSEUM TEEN SUMMIT MEMBERS!



I'D LOVE TO JOIN YOU

We open applications seasonally. Eligibility includes previous participation in a museum program. We do offer other ways to get involved, just let us know what you're interested in!

Join our mailing list and follow us on our social media.

Email: museumteensummit@gmail.com

I'D LOVE TO WORK WITH YOU

We are always open to collaborate and meet with various cultural institutions / groups on projects, consultations or just to have fun. Need us to come in for a consultation session? Our traveling group meets at different museums each week, so if you would like to have us one week, feel free to contact us. Bookings are available through our email.

A happy teen will always be happy also assist you with any other inquiries through our email (ex: promotion events / programs)

Email: museumteensummit@gmail.com

Museum Teen Summit (MTS) 2016b

MUSEUM TEEN SUMMIT THE MISSION

#1 OUTREACH

MTS takes on marketing for museum educators, bettering outreach to youth.

#2 RESEARCH

MTS seeks to develop a central database for teens to use, events and events in the New York City area.

#3 COMMUNITY

Through event planning, marketing and database, MTS hopes to build a better community between youth and museums.

Appendix 66: AASLH Blogs 2013

Teen Program Success – The Big 10 List from Museum Teen Summit

Pinterest

July 31, 2013

The Museum Teen Summit – a group of youth leaders representing different museums in New York City – is dedicated to improving and promoting the role of youth in museums. At this very first MTS, we brainstormed and compiled our Big Ten List of what makes a successful teen program. This list describes what teens expect from their museum experience, as well as how teens and museum staff members can develop suitable programs. While most the MTS was devoted to art museums, programmers can apply these principles to history museums, too.



Big 10 List

1. **Learn about different career opportunities by meeting with communications, marketing and curatorial staff, for example.** High school years are when students explore career opportunities. Museums are packed with professionals from different fields. We can get so much out of programs that let us see what museum careers are like. We can also learn that museums are not all about art; there are conservators, marketers, researchers, administrators, historians and educators, as well.
2. **Discuss hard-to-understand concepts. We're here to learn!** The key word here is "discuss." We don't want to be *told what* the art means or *why* it's interesting. We're told things all the time in school. Learning should be driven by active engagement. Why choose a hard-to-understand concept? Ideas that aren't obvious are inherently more intriguing and thought-provoking.
3. **Let us put our own opinions into our work.** It doesn't matter what the product is or how the result looks. Let us be creative and feel fully engaged. By allowing us to begin projects on our own, or to solve problems with a fresh perspective, we'll gain a sense of ownership.
4. **Make art.** The George Washington University reports that almost half of all teens are chronically disengaged in school. This isn't surprising. Too much of our

learning is passive, not active. In school, we sit in a classroom and listen to our teacher talk. Hands-on activities, such as making art, can help us learn through our own experience instead. Also, it's more fun!

5. **Provide opportunities to learn from each other.** It's not always about learning from adults or professionals. Based on our observations, teens are more comfortable when they learn from their peers. Museums should consider this when designing teen programs.
6. **Trust young people to make decisions.** We're not asking to be treated like grown-ups; we aren't grown-ups. We're capable of making decisions, and we're open to advice and guidance from adults. We merely ask that you acknowledge, respect and trust our judgment.
7. **Collaborate with artists.** Collaboration is a great way for artists and young people to learn from each other. Teens will find a new talent, meet other teens, and have fun. What can be more inspiring than working with real professionals?
8. **Give young people real projects to work on in the museum.** Looking at and learning about projects in museums is cool. Working on projects is cooler. It's also an effective way of understanding and appreciating the museum professional's process.
9. **Create spaces for us to grow.** Museums should be more than just places where we learn about art. They should also be places where we develop our own ideas and thoughts through quality teen programs.
10. **Provide a variety of ways to be involved, such as drop-ins, multiple-weeks, leadership programs, and social programs.** As one MTS member said, "*Teen programs: they're not just an after school special.*" Museums should avoid programs that only attract certain kinds of teens or programs that take a "one-size-fits-all" approach. Teens come in all forms with all kinds of interests. Museum programs should reflect this diversity. After all, we do represent your future.

We are constantly learning from each other, from museum professionals, and from our collective experience. This list is not permanent. As Museum Teen Summit grows and changes, this list, too, might change.

Members of Museum Teen Summit have presented at the American Alliance of Museums and New York City's Museum Educators Roundtable. In addition, they have created 6 teen events with museums in New York City. Currently, the group represents 16 different museums. For more information about the group, visit www.museumteensummit.org.