MISSION & VISION
GlassRoots ignites and builds the creative and economic vitality of greater Newark, with a focus on underserved youth and young adults, through the transformative power of the glass art experience.

Through involvement with GlassRoots’ arts, NJ residents of all ages are empowered to think creatively and realize new visions of their futures through the art of glassmaking. Widely renowned for excellence in collaborative programming, GlassRoots presents high quality, rigorous, innovative, relevant, and diverse programming that both reflects and expands the community’s interests.

BACKGROUND
In fiscal year 2016, GlassRoots’ programming for youth and young adults included One Day Field Trips, Long Term Residencies, FLAME (a teen internship program), Business & Entrepreneurship (a teen after school program) and the workforce development programs, the Bead Shop and the VARIS Scientific Glass Program (for young adults).

In February 2015, GlassRoots created and implemented a Program Evaluation and Assessment Protocol, funded through the generosity of the Victoria and Geraldine R. Dodge Foundations. While GlassRoots has made a positive impact on the greater Newark community for 15 years, and we know, anecdotally and from “customer” feedback that our success grows every year; for the first time the results of our impact are being measured and documented.

Working with independent evaluator Dr. Deborah Ward, GlassRoots created logic models for each of our programs and designed survey tools to determine how well each is meeting its respective objectives. Short term programs (e.g., a One Day Visit/Field Trip) include a single post-program survey for participants to complete. Participants in longer term programs (e.g., a 10-week Mosaic Residency) completed both pre- and post-program surveys.

Studies of our year-long programs (FLAME and Business & Entrepreneurship) and our summer Youth Leadership Corps (YLC), entailed additional evaluation mechanisms including student journaling, teacher observations, still photography,
and reflective conversations between teachers and students.

We began administering surveys in May 2015, and collected a full year of data in FY 2016. This report begins the documentation of our findings, including our successes as well as lessons learned for refining evaluation protocols going forward.
ONE DAY FIELD TRIP STUDENTS/CAMPERS

GOALS: To learn basic skills in glass art, to understand basic elements of STEM as related to glass art, to create a piece of glass art that can be taken home, and to have fun.

SURVEY GROUP: 215 respondents following participation in 2-3 hour programs

DEMOGRAPHICS: Majority of respondents (about 58%) reported being female. The largest number of respondents (about 18%) reported being 14 years old, and the racial/ethnic breakdown is 37% Black/African American, 27% Hispanic/Latino and 29% White/Caucasian.

SUCCESSES:

- GlassRoots serves an exceptionally diverse constituency that reflects the community of Newark and surrounding communities, as evidenced by the demographic self-reporting.
- 97% of respondents reported that they were “Very Satisfied” or “Satisfied” with their GR experience.
- 85% of respondents said Yes they would like to come back to GlassRoots; 15% said Maybe.

TEACHER EVALUATIONS

SURVEY GROUP: All teachers or chaperones are asked to complete a Teacher Evaluation Survey after the One Day Field Trip of a school or camp group. 41 respondents completed the survey. 33% reported being middle school teachers, 33% high school teachers, 18% elementary school teachers and 15% were other educators of some kind (counselors, administrators, etc.) A majority of the teachers reported being residents of Newark.

SUCCESSES:

- When asked to rate one’s agreement with the impact of GlassRoots’ Arts programs, following were the results for those who reported “Strongly Agree” and “Agree” (out of 41 respondents):

<table>
<thead>
<tr>
<th>Answer Options</th>
<th># Strongly Agree + Agree</th>
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</thead>
<tbody>
<tr>
<td>It increases student self-confidence.</td>
<td>40</td>
</tr>
<tr>
<td>It improves a student’s ability to express ideas.</td>
<td>39</td>
</tr>
<tr>
<td>It results in students having a better cooperative learning experience.</td>
<td>38</td>
</tr>
<tr>
<td>It results in students having better peer relations.</td>
<td>35</td>
</tr>
<tr>
<td>It results in students having a more positive attitude toward learning.</td>
<td>38</td>
</tr>
<tr>
<td>It results in students having a more positive attitude about school.</td>
<td>34</td>
</tr>
<tr>
<td>It increases student appreciation of the Fine Arts.</td>
<td>37</td>
</tr>
<tr>
<td>It increases student achievement in Science.</td>
<td>35</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>It increases student achievement in Math.</td>
<td>25</td>
</tr>
<tr>
<td>It increases student critical thinking skills.</td>
<td>30</td>
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</table>

- 91% of respondents agreed that the studios were well set up, well maintained, clean and instructors thoroughly implemented safety instructions.
- 95% of teachers reported satisfaction with their GlassRoots experience and that they would recommend GlassRoots to other educators, that they plan to return to GlassRoots and that their students were engaged and interested in the GlassRoots workshops.
LONG TERM MOSAIC RESIDENCIES

GOALS: To learn basic flat glass skills, and to practice 21st century skills such as teamwork, communication, collaboration and problem solving while creating a group or individual mosaic(s). Additional goal – to have fun.

SURVEY GROUP: In FY ‘16 GlassRoots provided long term mosaic residencies at three schools -- Cicely Tyson School for Performing Arts in East Orange, Philips Academy Charter School in Newark and Link Community Charter School in Newark. There were 31 respondents.

DEMOGRAPHICS: 52% of respondents reported being male while 48% reported being female. The largest number of participants (36%) reported being age 13, with 23% being 12 and 23% being 14. The racial/ethnic breakdown is 68% Black/African American, 19% Hispanic/Latino and 3% White/Caucasian.

SUCCESSES:

- 83% of participants reported they were “Very Satisfied” or “Satisfied” with the program.
- When asked to describe a favorite part of the program, most students wrote “Cutting the glass” or “All of it!”
- In “Tell us about your instructor” both GlassRoots’ mosaic instructors James Blake and Ya’zmine Graham received glowing reviews. The most common words participants used to describe their instructor were, “Amazing,” “Cool,” “Great,” “Nice,” “Fun” and “Helpful.”
FLAME PROGRAM

GOALS: FLAME stands for Focus, Leadership, Art, Mentorship and Entrepreneurship and these are the goals or concepts teen-age students learn and practice, one day a week for an academic year.

SURVEY GROUP: 14 respondents

DEMOGRAPHICS: 57% reported being female, 36% male and 7% gender neutral. 43% of respondents reported being 15 years old, 29% reported being 14 and 21% were 17 or older. The racial/ethnic breakdown was 64% Hispanic/Latino, 29% White/Caucasian and 7% Black/African American. All participants reported being Newark residents. 79% were participating in the FLAME program for the first time.

SUCCESSES:

- In measuring Socio-Emotional skills the surveys showed students reporting an improvement in their comfort with learning a new skill, with creative problem solving and in learning from mistakes
- 90% of participants were Very Satisfied or Satisfied with the program
- 92% said the program met their expectations
- 67% said they would tell their family and friends about GlassRoots

Some of the Post Survey Testimonials included:

- “I didn’t think the program was going to be as amazing as it was.”
- “I learned new skills.”
- “I learned how to work on a business.”
BUSINESS AND ENTREPRENEURSHIP PROGRAM

GOALS: Once a week after school, over the course of an academic year, teenagers learn and practice life skills (or 21st Century Skills) while designing a business around glass art or glass products.

SURVEY GROUP: 11 respondents

DEMOGRAPHICS: 64% reported being female, 27% male and 9% gender neutral. The largest percentage of students (36%) reported being 16 years old, 27%, 17 years old, 18%, 14 and 18%, 15. The racial/ethnic breakdown was 55% Hispanic/Latino, and 36% Black/African American. All students reported being Newark residents. 80% of participants reported enrolling in Business & Entrepreneurship for the first time.

SUCCESSES:

- 100% reported they would recommend Business & Entrepreneurship to a friend
- 100% of those students eligible to graduate high school did graduate high school
- 100% of those students who graduated, enrolled in a 2- or 4- year college
- 100% reported being Very Satisfied or Satisfied with the Business & Entrepreneurship program
- 100% of those who completed the program reported that their glass skill level in their studio of choice improved

Some of the Post Survey Testimonials included:

- “The most valuable part of the program to me was that it teaches hard work and responsibility.”
- “The most valuable part to me was that I made friends.”
- “I learned skills and I learned about business and glass.”
YOUTH LEADERSHIP CORPS

GOALS: The goals of the Youth Leadership Corps (YLC) program are to learn to mentor younger kids and to practice 21st Century skills such as collaboration, teamwork, problem-solving and communication.

SURVEY GROUP: 12 respondents.

DEMOGRAPHICS: 60% of our participants reported being female, (40% male); 40% reported being age 15; and racially/ethnically the breakdown of students was 50% Black/African American; 40% Hispanic/Latino; 10% White/Caucasian.

10 participants were residents of Newark, NJ (as this is a requirement of the organization that pays the students, Newark One Stop). Two participants were from areas outside of Newark and compensated by the NJ Seeds organization.

Glass skill levels increased from the beginning of the program to the end. (Participants were asked to rate themselves as beginners, intermediates or advanced in all three shops in the pre and post surveys).

SUCCEESSES: Socio-Emotional Skills - A majority of the participants’ self-rating of the skills listed below INCREASED. The numbers are based on an average of a 2, 1, 0, -1 or -2 point Likert scale. In the chart below, the lack of negative numbers is an excellent result and anything over 1.5 can be considered “good” or “great”. The Post results show an improvement in nearly all socio-emotional skills. In terms of program goals and impact, the fact that in general, the participants felt they got better as “a good mentor to kids younger than I am,” is a sign of success.
As reported by teaching staff and program director, a majority of the YLC’s really grew as teachers and mentors of young people, some in their focus and concentration (leading to sharper glass art skills) and nearly all students in self-confidence and self-expression.

100% of respondents reported they were either “Very Satisfied” or “Satisfied” with the YLC program.

70% reported they would be interested in enrolling in another GlassRoots program.

Program Impact: 90% of respondents reported that the YLC program made them want to Create Art; 80% reported that the program made them want to work with kids; 60% reported wanting to practice their new mentorship skills and tell people about their summer at GlassRoots.

<table>
<thead>
<tr>
<th>The YLC program has made me want to: (check all that apply)</th>
<th>Response Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask questions</td>
<td>50.0%</td>
</tr>
<tr>
<td>Learn more about other people</td>
<td>30.0%</td>
</tr>
<tr>
<td><strong>Create art</strong></td>
<td><strong>90.0%</strong></td>
</tr>
<tr>
<td>Solve a problem</td>
<td>40.0%</td>
</tr>
<tr>
<td>Practice my new mentorship skills</td>
<td>60.0%</td>
</tr>
<tr>
<td>Activity</td>
<td>Percentage</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Work with kids younger than I</td>
<td>80.0%</td>
</tr>
<tr>
<td>Take more of a leadership role in school</td>
<td>50.0%</td>
</tr>
<tr>
<td>Tell people about my summer at GlassRoots</td>
<td>60.0%</td>
</tr>
</tbody>
</table>

Perhaps the best sign of Satisfaction and effectiveness of programming is the personal testimonials provided by the students themselves. Participants overwhelmingly reported that the program met their expectations, and that they benefitted from it. Here are some of their comments.

- “Met my expectations; Nothing had to be improved. I wish this was a full time job.”
- “I was able to gain mentoring skills. I had so much fun. And all the times we went out to schools, it was fun teaching kids stuff that I learned.”
- “I was able to practice mentorship skills with kids younger than me, I was able to learn new skills and improve glass art skills, and I learned to take more of a leadership role.”
- “Honestly, the program exceeded my expectations because I've learned different techniques and tools.”
- “I felt I had major improvement in my hot shop skills and in public speaking. I used to be shy. My confidence is a level 10!”
VARIS SCIENTIFIC GLASS PROGRAM

GOALS: To train young adults (ages 18-24) to become proficient in scientific glass, such that they are ready for work in the scientific glass industry.

SURVEY GROUP: Four (4) respondents.

DEMOGRAPHICS: Of the four students, 75% (3) reported being male, and 25% (1) reported being female. 25% reported being 20 years old, 25% reported 21 years old, and 50% reported being over 21. The racial/ethnic breakdown was 50% Black/African American and 50% White/Caucasian.

SUCCESSES:
- 75% (3) participants completed the program
- The National Body of the Scientific Glassblowing Society was very impressed with all participants.
- One graduate now attends Salem Community College for Glass Education
- One graduate has taken steps to open an Etsy Shop and has begun to create a product line of borosilicate and soft glass jewelry
- One graduate is moving to Colorado to pursue a glass business/career
THE BEAD SHOP

GOALS: The Bead Shop is a program for women (aged 18 and up) to become proficient in flameworking and launch a business resulting in supplemental income.

SURVEY GROUP: 9 women; in 2016 the Bead Shop’s 3 week program ran twice.

DEMOGRAPHICS: 100% female, 57% reported being 18-24 years old and 14% reported in each age group of 25-34, 35-44, and 45-54, respectively. The racial/ethnic breakdown is 57% Black/African American, 43% Hispanic/Latino and 14% White/Caucasian. 74% of students reported this program was their first GlassRoots experience.

SUCCESSES:
- 1 graduate developed her flameworking skills to such a high level she was hired as a part time instructor at GlassRoots in the Flame Shop
- 3 graduates took steps to open Etsy Shops upon completing the program
- 4 graduates have asked for follow-up sessions
- 2 graduates have attended the Bead Hive Club following graduation
- One graduate has attended 100 percent of her follow up sessions.
EVALUATION MOVING FORWARD

Overall, the data we have collected has shown us that our programs for youth and young adults are successful and achieving program objectives. The data shows an overwhelming majority of kids and teachers enjoy their GlassRoots experience(s) and express a desire to come back.

However, we have also learned how we could improve our protocol and thereby better evaluate our program impact. Our system has also helped us to identify the challenges to specific programs. Following are proposed changes to the Evaluation Protocol and to the programs themselves.

EVALUATION PROTOCOL NEXT STEPS:

- Socio-emotional impact may be better documented through observation, both written and verbal by GlassRoots staff, as opposed to through survey questions by participants. The long term programs in which we ask students to assess their socio-emotional skills in pre- and post- surveys are very small groups. Measuring impact of this kind is more valuable where the number of respondents is 100 or more.
- For our One Day Field Trip post survey, we are currently missing whether students learn how STEM connects to the glass arts. New survey questions to capture students’ understanding of scientific terms such as, “gravity”, “viscosity”, “2000-degree molten glass,” etc., and concepts related to geometry, observation and measuring could be added.
- Currently, we know all students on field trips leave GlassRoots with one or two finished pieces of art or jewelry. We could add a question about the participants’ experience of art making, and their feelings about their finished product(s).
- Until now, we captured zip codes in a way that couldn’t easily be sorted in Excel. Going forward, youth will be asked to select their Newark zip code if they are from Newark or identify their home town and zip code if they are not.
- Paper surveys vs. technology. Apparently, completing these surveys via technology (on computers or tablets) leads to capturing data more accurately. The paper surveys require hours of administrative support and are not cost-effective. In our first year, the tablets we used for survey recording proved unsuccessful. We will continue to pursue funding for technology that is compatible in all our studios, that allows up to 15 students to complete the survey at once.
ADDRESSING PROGRAM CHALLENGES:

Program challenges in four of our programs, Business & Entrepreneurship, FLAME, Varis Scientific Glass and The Bead Shop remain constant; our new Evaluation protocol, in some cases served to highlight these problems.

- **RECRUITMENT** and **RETENTION** in year-long youth and workforce development programs are a challenge. In Business & Entrepreneurship and FLAME teen programs and our two workforce development programs, we struggle to find students and then to keep them through graduation with minimal absences. Teens, in particular, are an over-extended group with many conflicting responsibilities. The retention difficulty contributes to an evaluation problem. Capturing participants’ thoughts in pre- and post-surveys can be unreliable. In FY ’16, for example, Business & Entrepreneurship began with 11 students and ended with 5, greatly skewing our data collection. Going forward we may want to consider teaching our business and entrepreneurship objectives through a program that doesn’t require this recruitment and retention difficulty.

- In our Varis Scientific Glass Program the aim is to help graduates land a job or further training in scientific glassblowing, much of which exists in Southern Jersey. Salem Community College Glass Education Center and many pharmaceutical and chemistry lab jobs are too far to get to for Newark residents without a car.

- In the Bead Shop, matching the schedules of students with instructors is challenging, and given GlassRoots current studio availability, providing space for ongoing work has proven difficult. Bead Shop participants need translation services if they do not speak English. We would also need our Pre- and Post- surveys to be translated into Spanish.