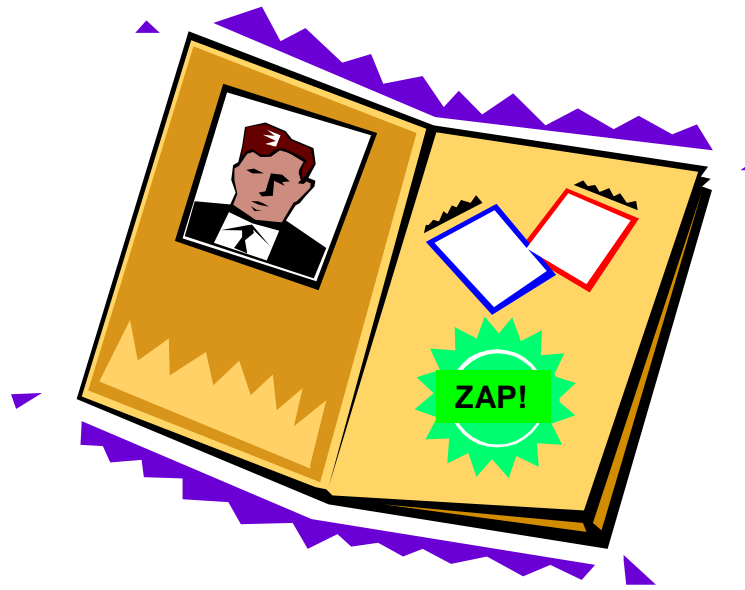


Evaluation of Brookfield Zoo's Zoo Adventure Passport Program



by
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August 2003 - April 2004

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Executive Summary

Purpose of Evaluation

The primary purpose of the evaluation was to examine informal and unstructured linkages between the Zoo Adventure Passport (ZAP!) program and students' activities and performance in school. The evaluation is a descriptive project to document whether children or parents who attend ZAP! programs use the information they learn elsewhere (e.g., at school, at home, with friends) and, if so, how.

Terrie Nolinske, Ph.D., Principal of TNI Consultants in Professional Development, was contracted with to develop and implement evaluation protocol, which began in August 2003 and completed in April 2004.

Evaluation Questions

1. Do children who participate in ZAP! programs use the information they learn at school? If so, in what way(s)?
2. Does participation in ZAP! programs promote quality family time or facilitate family interaction at home? Do ZAP! participants share information with siblings or friends? If so, in what way(s)?
3. Does participation in the ZAP! program stimulate curiosity or interest in world events? If so, in what way(s)?
4. From the point of view of teachers and librarians, how do young people and their families benefit from the ZAP! program?
5. What effect, if any, does the ZAP! program have on the use of school library or public library resources?

Participants

Dr. Nolinske conducted primary interviews with 37 families, 45 adults and 48 children, who attended ZAP! programs held at the following public libraries:

Chicago Public Library-Austin Branch	5 families	-- 5 adults, 4 children
Maywood Public Library	2 families	-- 2 adults, 3 children
Chicago Public Library-Rudy Lozano Branch	17 families	-- 21 adults, 26 children
Chicago Public Library-West Belmont Branch	13 families	-- 13 adults, 15 children

Secondary interviews included children's librarians at the four public libraries, one school librarian and four teachers who were also parents of ZAP! participants. One teacher, a member of the ZAP! Community Advisory Board, was interviewed for her views on the ZAP!'s benefits. Nine teachers were contacted of students for whom six projects were ultimately acquired, but none were aware of ZAP!. This was not surprising since ZAP! is an outreach program of Brookfield Zoo, held at three branches of the Chicago Public Library and one suburban library. The ZAP! program does not formally cross over into the schools. When recruiting students to participate in ZAP!, the teacher often takes a break and leaves the room.

Evaluation Methods

Evaluation methods used to gather data included in-person interviews, telephone interviews and family focus groups. A portfolio of student work was compiled to illustrate how six students applied information learned in ZAP! programs to their schoolwork.

Data Analysis

Narrative interview responses were reviewed to identify patterns, trends or themes.

Results

Interviews were conducted with five librarians, one teacher, four teachers who were also parents of children attending ZAP! and 37 families, which amounted to talking with 103 individuals – 55 adults and 48 children. Overall, 28 families used ZAP! information at school, 23 families used ZAP! information at home and 18 families used it at school and at home. Attendance at only one ZAP! program makes a difference! If adults or children found they could apply what they learned in ZAP!, they did. There was no correlation between the number of years children and adults attended ZAP! with the frequency or way in which ZAP! information was used.

Responses as to how ZAP! information was used were clustered into the following seven categories, each illustrated by several quotes from respondents:

1. ZAP! positively influences academic work

Alexis, 6 y/o boy (Rudy Lozano Branch) in ZAP! since 2003

"My kindergarten teacher showed us a flag with a red dot on it and I told my teacher that it was the Japanese flag! I knew it from ZAP!"

Rachel, 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"I made a poster against drugs for school. I made a car that looked wrecked to show people what could happen if you take drugs and then drive. I learned to re-use things in ZAP! so I used materials for my project that I already had -- like I used a cardboard box from brownies and a sugar box for the car and wrote recycled on it and made other things, too. It was like a 3-D poster of a car wreck to show what happens when you use drugs *and* my project was good for the environment."

Andreas, 10 y/o boy (Rudy Lozano Branch) in ZAP! since 1997

"When we do science at school I already know stuff that the teacher is saying because I learned it at ZAP!. I don't get bored because I am hearing the same stuff two times. I learn it two times and then I understand it better."

2. ZAP! positively influences family interactions, interests, discussions and activities

Mrs. P., parent of 4 y/o girl (West Belmont Branch) in ZAP! since 2002

"We used to do ZAP! as a family but sometimes my husband has to work. Then Isabel and I go. The information from ZAP! is so wonderful. It's nice to go to something as a family and not be by ourselves. We're with a group and can learn from them and from Saira. I know my children are safe and in good hands when we go to ZAP!."

2. ZAP! positively influences family interactions, interests, discussions and activities (cont'd)

Mrs. Mo., parent of 5 y/o girl (Rudy Lozano Branch) in ZAP! since 2002

"We practice the alphabet using names of animals that begin with a certain letter -- animals that we learn about in ZAP!. I will say 'Remember the alphabet? B is for...!' and then Kimberly will say 'Butterflies!' I try to take extra materials home from ZAP! with us so that we can do the activity again."

Mrs. Ro., parent of 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"Alexandra has won several educational books about animals and nature from a raffle at ZAP! These books make her pleasure reading very informative. We talk about some of the things she reads in her books and remember what Saira told us about them at ZAP!."

Stephan, 16 y/o boy (Austin Branch) in ZAP! since 1999

"I love animals and liked ZAP! I went to swap meets to get tiger's teeth, shark teeth, feathers and animal things. I put on demonstrations on the front porch for my family and friends. I make the porch into a stage with exhibits to show people in the neighborhood some of my animal things and talk about them."

3. ZAP! teaches children to take action to protect plants, animals and the environment

Mrs. F-S., parent of 11 y/o girl (Rudy Lozano Branch) in ZAP! since 1996

"When we go to the beach on Lake Michigan, we see birds, often with hooks in their mouths or injured legs. Tori made me call the city and ask them to make sure the birds got care. ZAP! has made Tori more conscious about conservation and recycling. She will tell me 'Mom, you're using too much paper!' After studying the environment and doing things like cleaning up the river on ZAP! fieldtrips, she will see cans on the sidewalk and put them in the garbage where someone might find and recycle them."

Bradley, 12 y/o boy (West Belmont Branch) in ZAP! since 1999

"I try not to step on insects like other kids do because of what I learned at ZAP!."

Alma, 13 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"I invited some kids in my classroom to ZAP! so that *they* can learn what *I'm* learning."

4. ZAP! stimulates curiosity and interest in volunteerism and career paths

Mr. Gu., parent of 8 y/o girl (West Belmont Branch) in ZAP! since 1998

"My 8 y/o daughter and I talk about what she wants to be when she gets older. ZAP! has exposed her to nature and types of careers, like being an educator at the zoo."

4. ZAP! stimulates curiosity and interest in volunteerism and career paths (cont'd)

Mrs. O.-R., parent of 12 y/o girl (West Belmont Branch) in ZAP! since 1997
"Victoria wants to be a veterinarian when she grows up. She has been greatly influenced by what she has learned at ZAP!."

Nimbe, 14 y/o girl (Rudy Lozano Branch) in ZAP! since 1998
"ZAP! got me started on the youth volunteers that I'm in now at Brookfield Zoo."

5. ZAP! promotes acquisition of skills in play, time management, reading, socialization and use of resources

Mrs. Sk., parent of 5-1/2 y/o girl (West Belmont Branch) in ZAP! since 2000; teacher, Reinberg School
"Julia's made friends at ZAP! that we've invited to her birthday party. We met friends at ZAP! that we invite to our home. I met one of the mother's at ZAP! who has become a great friend. We go to church and on some ZAP! fieldtrips together -- we don't just see each other at ZAP! programs."

Mrs. R., parent 7 y/o girl (West Belmont Branch) in ZAP since 2001
"ZAP! creates a community that, as an only child, Rachel doesn't have. It's also good for her to see people from different cultures at ZAP! programs so she becomes familiar with peoples' differences and it's not something strange as she grows up."

Alma, 13 y/o girl (Rudy Lozano Branch) in ZAP! since 1998
"I've won some *really* neat books in the raffle at ZAP! I like reading them and read them to my brothers and sisters."

Nimbe, 14 y/o girl (Rudy Lozano Branch) in ZAP! since 1998
"When I was in a health / first aid class in 7th grade at the Orozco Academy, we had to do a report on injuries people could get. I chose snakebites, because I had been coming to ZAP! since 4th grade and I knew I could get information and help for my report here [ZAP!]. I also read different library books and looked at information on the Internet to learn more about how bites can be treated. I had fun doing the report. It turned out pretty well!"

6. ZAP! stimulates interest knowledge about diversity, culture and world events

Rachel, 7 y/o girl (West Belmont Branch) in ZAP since 2001
I named my doll 'Kenya'. I had been to ZAP! and we learned about some of the culture in Africa and my doll has dark colored skin so I named her Kenya. It's good to learn about people from other places around the world and how we are different than them and the same."

7. ZAP! draws families into branches of public libraries year round while stimulating families to use the libraries as resources

Ms. R. S., Children's Librarian (Rudy Lozano Branch)

"The Mondays and Saturdays of ZAP! programs are our busiest days. People in this area don't get out of the neighborhood often. They call and say 'I heard you have a program that goes on fieldtrips.' I tell patrons about ZAP!. They love being able to come to the library for the programs and then go to the zoo or to another museum.

"Families are very loyal to ZAP!. Kids and their parents stick around the library after ZAP! to do research, read or find books to check out related to ZAP! topics. I notice that kids in the ZAP! program are likely to come into the library more often than kids not attending ZAP!."

Ms. St., Children's Librarian (West Belmont Branch)

"ZAP! brings people into the library. What I have noticed since ZAP! began is that parents and their kids come early and stay later at the library on ZAP! days. Although I am unable to quantify this, I have observed that children in ZAP! do read more books about animals and nature than children who do not attend ZAP!."

Victoria, 12 y/o girl (West Belmont Branch) in ZAP! since 1998

"I used ZAP! in 5th grade. At the end of every month we had to turn in a report for science class. I did a lot of reports on animals that I learned about in ZAP!. I got a lot of extra materials and books out from the library to use in my reports."

Teachers who are also parents of ZAP! participants stated that ZAP! allows children to test out new information and apply it to an activity, explore, ask questions, make things, develop skills in critical thinking, improve listening skills, improve reading comprehension and learn words in a new language. ZAP also creates a partnership between parents and children in the learning process.

Although the ZAP! program is strongly identified with Saira and the docents, participants know that ZAP! is the "zoo program at the library". Everyone interviewed had high praise for the sound pedagogical principles and methods Saira uses when presenting ZAP! programs.

Future Considerations

- ♦ conduct a cost / benefit analysis; develop alternative programming for the Austin Branch
- ♦ identify additional marketing and recruitment strategies for ZAP! programs
- ♦ highlight career options and compile a list of career resources
- ♦ offer ZAP! lessons as a fee-based program for teachers, students and seniors
- ♦ create manuals for each lesson or topic; use as basis for teacher workshops

There are certainly many possibilities for extensions of the ZAP! program. As with any program, the logistics are complex. The comments in this section of the report are not meant in any way to diminish the existing program, which is soundly delivered in accordance with its mission. Rather, these comments are things to stimulate thought, as educators at Brookfield Zoo think about new audiences, new programs or new directions.

ZAP! EVALUATION REPORT

PURPOSE of the EVALUATION

In February 2003, Keith Winsten, Director of Education and Communications at Brookfield Zoo, asked Terrie Nolinske, Ph.D., Principal, TNI Consultants in Professional Development, to submit a proposal for evaluating the ZAP! program.

The primary purpose of the evaluation was to examine informal and unstructured linkages between the Zoo Adventure Passport (ZAP!) program and students' activities and performance in school. The evaluation is a descriptive project to document whether children who attend ZAP! programs use the information they learn there anywhere else (e.g., at school, at home, with friends) and, if so, how.

EVALUATION QUESTIONS

1. Do children who participate in ZAP! programs use the information they learn at school? If so, in what way(s)?
2. Does participation in ZAP! programs promote quality family time or facilitate family interaction at home? Do ZAP! participants share information with siblings or friends? If so, in what way(s)?
3. Does participation in the ZAP! program stimulate curiosity or interest in world events? If so, in what way(s)?
4. From the point of view of teachers and librarians, how do young people and their families benefit from the ZAP! program?
5. What effect, if any, does the ZAP! program have on the use of school library or public library resources?

PARTICIPANTS

Participants in this evaluation project included 48 children and 45 of their parents or caregivers, one schoolteacher, one children's librarian in the schools and four in branches of the public libraries as well as four parents of children who attend ZAP! who were also schoolteachers (see Appendix, pp. 45-48).

The original evaluation plan described participants as being in the third, fourth or fifth grades and as having attended at least six ZAP! programs. Children in this age range had been selected because it was believed they would be more apt to reliably recall and report whether they used ZAP! program material than their younger counterparts.

The minimum number of programs attended had been set at six for two reasons – first, because it was twice the minimum number of programs required to be invited to Family Day at Brookfield Zoo and second, because six programs covered enough content to be related to most academic curricula. The criteria for inclusion in the evaluation project changed; after conducting seven family focus groups during ZAP! Family Day at Brookfield Zoo on August 9, 2003, it became clear that young children were able to recall what they learned from ZAP! and how they used the information.

Since the main focus of the project was to identify ways in which children used ZAP! material outside of the program, Dr. Nolinske broadened inclusion criteria for evaluation participants to include any child and their parents / caregivers who attended ZAP!.

A convenience sample of children and their families was selected from among those who attended ZAP! programs from August 2003 through April 2004. Participants were recruited in several ways. Dr. Nolinske attended most ZAP! programs, asking parents and children whether they used the ZAP! information outside of the ZAP! program. If they did and if they agreed to participate in the evaluation process, they were asked to complete two informed consent forms in either English or Spanish (see Appendix, pp. 42-43 for English forms). During program registration, ZAP! staff and docents asked ZAP! participants whether they used ZAP! information outside of the program. If so, they were asked to participate in the evaluation project and complete the consent forms. Both consent forms were signed by ZAP! staff. One form was returned to the family. The second form, containing the family's contact information, was given to the evaluator by program staff.

Dr. Nolinske attended four ZAP! Community Advisory Board meetings at the Chicago Public Library-Rudy Lozano Branch (September 25, 2003), Chicago Public Library-West Belmont Branch (October 1, 2003), Maywood Public Library (October 2, 2003) and Chicago Public Library-Austin Branch (October 22, 2003), to make advisory board members aware of the project and to solicit their input for participants in the project (see Appendix, p. 41). Dr. Nolinske also attended the Community Advisory Board Meeting at Brookfield Zoo on Sunday, December 23, 2003 to give an update on the project and, again, recruit project participants.

Dr. Nolinske conducted primary interviews with 37 families, 45 adults and 48 children, who attended ZAP! programs held at the following public libraries:

Chicago Public Library-Austin Branch	5 families	-- 5 adults, 4 children
Maywood Public Library	2 families	-- 2 adults, 3 children
Chicago Public Library-Rudy Lozano Branch	17 families	-- 21 adults, 26 children
Chicago Public Library-West Belmont Branch	13 families	-- 13 adults, 15 children

Secondary interviews included four children's librarians at the four public libraries, one teacher, one school librarian and four teachers who were also parents of ZAP! participants. A total of 103 individuals were interviewed between August 2003 and April 2004.

One teacher, a member of the ZAP! Community Advisory Board, was interviewed for her views on the ZAP!'s benefits. Nine teachers of students for whom projects were ultimately acquired, were contacted, but none were aware of ZAP! or had anything to say about it.

This was not surprising since ZAP! is an outreach program presented by Brookfield Zoo at ZAP! Zoo Adventure Passport Evaluation 2003 - 2004

three branches of the Chicago Public Library and one suburban library. ZAP! does not formally cross over into the schools. not formally cross over into the schools. When recruiting students to participate in ZAP!, the teacher often takes a break and leaves the room.

While this small number of participants is not large enough to generalize responses or findings to a large population, it does give some insight into how ZAP! participants use the information they learn during ZAP!.

EVALUATION METHODS

Evaluation methods used to gather data included in-person interviews, telephone interviews and family focus groups. A portfolio of student work was compiled to illustrate how students have applied information learned in ZAP! programs to their schoolwork.

The preferred method of collecting data was the in-person interview of parents, relatives, children and librarians before or after a ZAP! program. Due to conflicting schedules, this was not always possible. Telephone interviews were also used to talk with teachers, librarians and ZAP! participants of all ages. Family focus groups were used as a means to gather information from parents / caregivers and children who attended ZAP!., where members of a family sat around a table, listening as questions were asked and responding, as appropriate.

Using interviews and family focus groups allowed the evaluator to meet with individuals or small groups of related individuals to get an in-depth understanding of how children and adults used or applied the information learned at ZAP! program. Interviews and focus groups were identified as the most appropriate strategies for this project because the evaluator could prepare a list of questions, ask other questions, probe for additional information or clarify information. The interviews and focus groups provided descriptive information and allowed data to be collected in an efficient, meaningful way.

DATA COLLECTION

Upon receipt of the consent form, Dr. Nolinske contacted the family to jointly determine the best date, time and place to talk. Approximately 60% of the information was gathered spontaneously during interviews and family focus groups before and after monthly ZAP! programs at the Chicago Public Library-West Belmont Branch, Chicago Public Library Rudy Lozano Branch, Chicago Public Library-Austin Branch and the Maywood Public Library (see Appendix, p. 44).

The remaining 40% of the information was gathered during telephone interviews with teachers, librarians, parents and children who attended ZAP!. There appeared to be no significant differences in responses between interviews done over the telephone and in-person.

The average interview time spent with adults and children was 75 minutes, although interviews ranged from ten minutes (if participants had not used program information) to three hours (if they had). The evaluator took copious notes during all interviews.

During the interview, children were asked to give the following information: their age, school name, grade and library name. Children were also asked whether they ever discussed ZAP! with their friends, their parents and / or siblings, schoolmates or teachers. Children were asked whether they used the information learned at ZAP! in school. Children and parents were reassured that it was acceptable to just attend and enjoy ZAP! programs; they did not have to feel compelled to use the information outside of the program. Probing was only done if participants appeared to be unsure of the question. If they had used ZAP! information, they were asked to describe how they had used the information.

Parents were asked to confirm information given by their children and to share the following information: ways in which they used the information provided by ZAP! outside the program and, if so, how; ways in which their children used the information; and ways in which ZAP! programs effected family time or the nature of family interactions at home.

Librarians were asked if they had noticed any trends involving use of library resources as a result of the ZAP! program. Teachers were asked to describe the benefits to children of the ZAP! program. Parents of children attending ZAP! who were also teachers were asked to describe ways in which their own children used ZAP! information. They were also asked to describe the more general benefits of the ZAP! program.

The greatest challenge of data collection was obtaining examples of students' projects, showing how they applied ZAP! content to their schoolwork. In many cases, children had used ZAP! content in the past but no longer had the physical example of their work. Or, the teacher had kept the work and could no longer find it.

In 23 cases, with the parents' permission, Dr. Nolinske contacted the teacher of a ZAP! participant, explained the evaluation project and asked to borrow the student's work to include in the project portfolio. The original work of six students was obtained, photographed or copied and returned to the student. A copy of their work was included in the ZAP! evaluation project portfolio.

DATA ANALYSIS

Once an interview was completed, notes were immediately entered into Excel spreadsheets, on a worksheet created for each of the following four categories – children and parents or caregivers, teachers, librarians and parents who were also teachers. Information entered into the database included street address, phone(s) and email address; name of the ZAP! participant, child's age, school, grade and length of time in ZAP!. Interview responses were entered that described how ZAP! information was used outside of the program -- at home or at school. Additional information, as relevant, was also entered.

Narrative interview responses were reviewed to identify patterns, trends or themes. Response data were clustered into 27 groupings – each grouping containing responses similar in content. Headings were created, representing the content of each of the 27 groupings. The headings, in turn, were reviewed to identify patterns and themes. The headings were then further collapsed into seven response categories that accurately represented the more numerous response clusters.

RESULTS

Interviews were conducted with five librarians, one teacher, four teachers who were also parents of children attending ZAP! and 37 families, which amounted to talking with 103 individuals – 55 adults and 48 children. Of the 40 families approached to participate in the evaluation project, only three families preferred not to participate. Of the 37 families interviewed, 34 families used information they learned at ZAP! outside of the program.

Overall, 28 families used ZAP! information at school, 23 families used ZAP! information at home and 18 families used it both at school and at home. Attendance at only one ZAP! program makes a difference! If adults or children found they could apply what they learned in ZAP!, they did. There was no correlation between the number of years children and adults attended ZAP! and the way in which ZAP! information was used.

Librarians (N = 5)

Howe School. Richard King, Librarian at Julia Ward Howe School, is active in the recruitment of children to attend ZAP! programs. He has served on the ZAP! Community Advisory Board at the Chicago Public Library-Austin Branch, since 1996. Mr. King did not observe any correlation between attendance at ZAP! and library use.

Children's librarians in the branches of the public libraries, however, noted several things, which makes sense given the ZAP! program was held at their libraries and they worked closely with ZAP! staff on facility logistics.

Chicago Public Library-Austin Branch. Kenneth Nelson, Children's Librarian at the Austin Branch through March 3, 2004, had nothing specific to say about ZAP!. He said he tries to assist ZAP! in monitoring children while the program is in session to prevent children from running in and out of the ZAP! program room. Mr. Nelson served on the ZAP! Community Advisory Board at the Austin Branch from 1999 - 2004.

Maywood Public Library. Sheila Ferrari, Children's Librarian at the Maywood Public Library, has served on the ZAP! Community Advisory Board at that library since 2003. She said that the word is still getting out about the ZAP! program, which started at the Maywood Public Library in 2003. She stated that it was difficult to recruit families to attend ZAP! and hypothesized that the world has become over-scheduled.

Chicago Public Library-Rudy Lozano Branch. Rosa Reyez-Sanchez, Children's Librarian at the Rudy Lozano Branch, has served on the ZAP! Community Advisory Board at that library since 1997. She noted the following:

"ZAP! programs keep people coming into the library all year round, even in the cold winter weather. Kids and their parents stick around to do research, read or find books to check out. They not only use the books but also our resources, like the computers before and after the ZAP! program. I have noticed that kids in the ZAP! program are more likely to come into the library more often than kids not in ZAP!. Parents tell me they love ZAP! -- especially since it's bilingual.

"People call me and say 'I've heard that you have a program that goes on fieldtrips...' and I tell them it's a zoo program at the library. They usually cannot wait to sign up. They love being able to come to the library for the programs and also go out to the zoo or to another museum. I love ZAP! because it's a great program and I can tell library patrons about it."

Chicago Public Library-West Belmont Branch. Susan Storm, Children's Librarian at the West Belmont Branch, has been involved with ZAP! since 2001. She notes the following:

"The parents all know exactly where the books related to ZAP! are for their children. What I have noticed since ZAP! began is that parents with their kids come earlier to and stay later at the library on ZAP! days. Although I am unable to quantify this, I have observed that children in ZAP! do read more books about animals and nature than children who do not attend ZAP!. ZAP! kids seem to check out more books on an ongoing basis. Personally, I am thrilled by the ZAP! program, because it brings people into the library. ZAP! is well organized and taught in a fun way that keeps people thinking about the material long afterwards. ZAP! is *very* worthwhile."

Teachers (N = 1)

Despite over 83 phone calls to 10 teachers in nine months, only one teacher was ultimately interviewed. Heather Walters teaches art in pre-K through 8th grade at the Chicago Academy. Since fall 2003, she has been on the ZAP! Community Advisory Board at the Chicago Public Library-West Belmont Branch. Ms. Walters said she told ZAP! staff that she would be happy to talk about upcoming ZAP! themes and make suggestions for art and craft activities. Although Ms. Walters taught art to several children who attended ZAP!, she reported hearing no mention of ZAP! during her art classes.

Teachers / Parents of ZAP! participants (N = 4)

Mr. G. is a science teacher at Washington Irving School in Chicago with 15 years of experience. He attends ZAP! with his 12 y/o son at the Chicago Public Library-Rudy Lozano Branch.

Mrs. S. is an elementary teacher at Reinberg School in Chicago. She attends ZAP! with her 5-1/2 y/o daughter at the Chicago Public Library-West Belmont Branch.

Mrs. O.-R. teaches kindergarten for 5 and 6 y/o at the Pulaski Fine Arts Academy. She attends ZAP! with her 12 y/o daughter at the Chicago Public Library-West Belmont Branch.

Mrs. H. has taught for 11 years, in the 7-8th grades before teaching 3rd grade at Jose Clemente Orozco School Community Academy, in Chicago. She attends ZAP! with her 8 y/o son at the Chicago Public Library-Rudy Lozano Branch.

Family units (N = 37 families; 103 interviews – 55 adults and 48 children)

Dr. Nolinske conducted interviews with 37 families, 45 adults and 48 children, who attended ZAP! programs held at the following public libraries:

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Maywood Public Library	2 families	-- 2 adults, 3 children
Chicago Public Library-Rudy Lozano Branch	17 families	-- 21 adults, 26 children
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Children of all ages were generally forthcoming in sharing what they learned, what they liked and how they used ZAP! content. They were often more straightforward than their parents about whether they used ZAP! information outside of the program or not. Dr. Nolinske took care to minimize the effects that social desirability played in the evaluation process, reassuring both parents and children that it was acceptable if they just attended and enjoyed ZAP! programs without subsequently using the information or talking about it. It is important to remember that whether or not children used ZAP! information at school depended on what they were studying that year as part of the academic curriculum in addition to what their teacher was interested in or most familiar with.

Hugo, 8 y/o boy (Rudy Lozano Branch) in ZAP! since 2000

"I haven't used ZAP! for a project or a report yet because we haven't had to study those things in school."

In reporting the results of interviews with adults and children, relevant responses have been clustered, by theme, around each of the five evaluation questions. Children with an asterisk () before their name have schoolwork in the evaluation project portfolio.*

1. Do children who attend ZAP! programs use the information they learn at ZAP! in school? If so, in what way(s)?

ZAP! gets children started on subsequent volunteer programs

Nimbe, 14 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"ZAP! actually got me started on the youth volunteers that I'm in now at Brookfield Zoo."

ZAP! influences participants opinion of academic subjects

Omar, 8 y/o boy (West Belmont Branch) in ZAP! since 2002

"At ZAP!, the activities and the facts you learn about social studies is making social studies my favorite subject!"

ZAP! material / information used by parents to home school children

Mrs. P., parent of 4 y/o girl (West Belmont Branch) in ZAP! since 2002

"I home school Isabel. It is great to have an after school project for her where I am not the leader. ZAP! compliments what I do in home schooling. When we do geography, I put maps in front of her and she has already been exposed to the countries in ZAP!. ZAP! heightens Isabel's awareness of and exposes her to so many different things. We do a lot of 'traveling' with Saira."

ZAP! material / information used by parents to home school children (cont'd)

Mrs. G., parent of 11 y/o girl (Rudy Lozano Branch) in ZAP! since 2000

"My husband and I home schooled Miranda since 2000. We both try to go to ZAP! but sometimes it's just me and Miranda because my husband has to work. The fieldtrips are great; we learn about nature and I take that information back home and turn it into an activity for Miranda. When we go on ZAP! fieldtrips -- like to the Indiana Dunes or to the Osaka Garden -- after the fieldtrip is over, Miranda writes about the fieldtrip in a journal -- what she liked about it and what she learned from it."

ZAP! information used for school projects or reports

Mrs. D., parent of 9 y/o girl (West Belmont Branch) in ZAP! since 2000

"Aisha had to choose a topic for research at school. Aisha had been at a ZAP! program and had seen the stages of tadpoles turning into frogs so she chose that topic for her research paper. Aisha did some of the research for this paper during a ZAP! fieldtrip to the Shedd Aquarium this year. In her paper she showed how a tadpole turns into a frog."

Rachel, 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"I made a poster against drugs for school. I made a car that looked wrecked to show people what could happen if you take drugs and then drive. I learned to re-use things in ZAP! so I used materials for my project that I already had, like I used a cardboard box from brownies and a sugar box for the car and wrote recycled on it and made other things, too. It was like a 3-D poster of a car wreck to show what happens when you use drugs. My project was good for the environment."

**Omar, 8 y/o boy (West Belmont Branch) in ZAP! since 2002*

"I am in the Edison Regional Gifted School and we have to do essays in school and, you see, I'd like to go to Australia since I learned about it ZAP!. So I am reading about Australia and learning about myself and about the country. I am writing my conclusion now."

**Luigi, 10 y/o boy (Rudy Lozano Branch) in ZAP! since 2002*

"At school in reading our class wrote a book about the alphabet. Our teacher gave each kid a different animal -- like the animal name started with each letter of the alphabet, and we had to make a scene, like a habitat, for our animal. We could make our animal out of paper or clay or flour and water. I made a hill for the cheetah."

Andreas, 10 y/o boy (Rudy Lozano Branch) in ZAP! since 1997

"I did a report in science on the great lakes because that's what we were studying. I learned about them at ZAP! because Saira told us about the five great lakes -- Michigan, Erie, Huron, Superior and Ontario. Sometimes kids in my class ask me how I know this and I tell them from ZAP!."

ZAP! information used for school projects or reports (cont'd)

Evelyn, 10 y/o girl (Rudy Lozano Branch) in ZAP! since 1997

"In 4th grade, we had to do a report and also write an essay. I really wanted to do my report on Japan because they write in a way different than we do. I learned so much about the culture, the writing, other colors and numbers. I can even write my name using Japanese characters. I got most of the information for my report from ZAP! and some from the encyclopedia."

Miranda, 11 y/o girl (Rudy Lozano Branch) in ZAP! since 2000

"When Saira teaches us it's like studying. What she teaches us helps when I take tests and when I do projects."

Fernando, 11 y/o boy (Rudy Lozano Branch) in ZAP! since 1997

"At school I am doing a project about pollution of water. Saira told us about this at ZAP! and also from a fieldtrip. If oil spilled in the ocean, sometimes the fish get hurt or killed. Sometimes the oil reacts with volcanoes in the ocean. Lots of toxic waste can kill things in the ocean."

**Tori, 11 y/o girl (Rudy Lozano Branch) in ZAP! since 1996*

"It is really hard to find good ideas for a science project. We had talked about seed germination at ZAP! and we learned how to plant bean seeds at ZAP!. Saira talked about how if you freeze the seeds or boil the seeds they won't grow right or at all. I was pretty interested in that so I decided to do my science fair project in 3rd grade on seed germination and see which seeds grew after I did something to them. I decided to plant corn, beans, marigolds and tomatoes in my garden at home. But first I boiled some of the seeds and I froze some of the seeds. For some reason I wanted to X-ray some seeds to see if that made them grow better. So, my mom called the dentist and he said that he would X-ray my seeds for my science project! Then I planted the seeds that I did things to and waited to see what happened; I think things grew for about three months. Do you know what? What grew the highest and the best was the corn that had been X-rayed! It was as tall as I was and the other corn only came up to my waist! I got special recognition for my project."

Tori, 11 y/o girl (Rudy Lozano Branch) in ZAP! since 1996

"Then, when I was in library class, we were studying animals in tropical climates and reading books about them so we each got assigned an animal. I got the lemur. We had to write a report on our animal and diagram it. I remembered I had information that told about lemurs that I got from ZAP! because we had just learned about lemurs. I also went to the Brookfield Zoo to see the lemurs but the building wasn't open but I was able to see them through the doors. I wrote a report that told what the lemurs looked like (with their light bulb eyes that stare out at you), their jumpy movements, what they ate, the color of their fur and things like that. Then we also had to diagram the animal -- put the animal in their environment. So I made an environment for the lemurs and put in trees and made lemurs out of clay and foil. I was able to use my

lemur project again at my different school, because I got assigned to do a report on lemurs there, too!"

ZAP! information used for school projects or reports (cont'd)

Abigail, 12 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"In 6th grade, we had to do a report about biomes for school and I did one on the temperate deciduous forest because I had learned a lot about animals who lived there in ZAP!. I took pictures out of a magazine and had to do a chart about how long were the seasons, what the temperature and climate was like, what did the forest look like, what animals lived there and what they found to eat. I had learned about the animals in ZAP!."

Jontez, 12 y/o boy (Maywood) in ZAP! since 2003

"We had to do a project in science class; I picked my topic out of a hat. I had to do something on the Hawaiian Islands. Other kids did stuff on the United States and Asia. I really didn't know anything about the islands. I used the things I learned about at ZAP! in my research. I told about the types of fruit people in the Hawaiian Islands eat and about the plants and people's customs. I had to explain if they had kings and queens, how many people lived in the islands and what did they have. I also had to name the islands. I ended up talking a lot about sound waves, too, because in ZAP! we had just learned about sound waves and oceans. The people have celebrations and the sound waves carry sounds pretty far. I did something about frequencies and how you find out the length of the sounds. When volcanoes erupt, and there is one volcano that erupts every night at midnight, it flows out into the ocean and the ocean carries the eruption and the sound of the eruption carries over the sound waves. That's what I learned at ZAP! and that's what I put into my report. It's hanging on the wall in a case in the hallway at school."

Victoria, 12 y/o girl (West Belmont Branch) in ZAP! since 1998

"I used ZAP! in 5th grade. At the end of every month we had to turn in a report for science class. I did a lot of reports on animals that I learned about in ZAP!. Last year we talked about Asia in ZAP!. Saira brought silk, of course, and a Chinese fan that was really big. In our science class, we had to make a chapter in a book about how silk was made. I made boxes and drew pictures in each of them to show different steps in how the caterpillars make silk. It was easy for me to explain to the teacher how do make silk because Saira had told us all about it in ZAP!. I have used ZAP! in other projects too but I can't remember what they were right now."

Kayla, 12 y/o girl (Rudy Lozano Branch) in ZAP! since 1999

"When I was younger, maybe in the 4th or 5th grade, I can't remember which, I did a project about lemurs that live in Madagascar, near Africa. I don't still have it but I learned a lot about lemurs in a ZAP! program at the library and that helped me with my project."

Mario, 12 y/o boy (Rudy Lozano Branch) in ZAP! since 2003

"In my class I had to write a report and you could pick the animal you wanted to do the report about and I picked the gorilla. I made a diorama out of construction paper and bought a gorilla at the store. I used some stuff from ZAP! and some from the Internet for my research. I especially use ZAP! in social studies and in science classes but it kinda depends on what we study."

ZAP! information used for school projects or reports (cont'd)

Matthew, 9 y/o boy (West Belmont Branch) in ZAP! since 1997

"It's kind of hard to know where and how I learned the information I use at school, but I know I definitely use stuff from ZAP! at school. Once I had to do this thing on prairies. Each group had to do a project on a biome and my group did a project on grasslands. I had just been to a ZAP! program and got information about grasslands that I used in my project. I went to the library and checked out about five more books. ZAP! really helped give us information."

Matthew, 9 y/o boy (West Belmont Branch) in ZAP! since 1997

"I had to do a Florida project. Each of us in my class got a different state and had to get facts about that state. I did research to find things out about Florida like the state flag and had to get, like, the capital and some basic information about what they grow, the economy of Florida and stuff like that. I checked books out of the school library and out of the ZAP! library for my Florida project."

Matthew, 9 y/o boy (West Belmont Branch) in ZAP! since 1997

"We had a litter cleanup project at school and my teacher asked each of us to write a letter to the governor of Illinois with ideas so people wouldn't litter. I wrote about the Chicago River clean up that I went on with ZAP!."

Paree, 9 y/o boy (Austin Branch) in ZAP! since 2003

"I did a project for science class and we had to tell the independent and dependent animals...and say what animals depended on their parents and what animals didn't. I remembered a lot of the safari animals from ZAP! and put the dependent animals on one side of my board and the independent animals on the other side of my board. I did a presentation to my class about my animals that I learned about in ZAP!."

Paree, 9 y/o boy (Austin Branch) in ZAP! since 2003

"I got a 'C' on another project I did with butterflies, reptiles and birds. In ZAP! we made butterflies on sticks. In my group for the project all of us had to study about birds, reptiles and butterflies only I knew about butterflies because we did them in ZAP!...we had to do research so we could tell our class about the animals and where they lived and what they ate and what they did. We beat the other group!"

Mrs. Ve. and Ms. San., parent and aunt of 10 y/o boy (Rudy Lozano Branch) in ZAP! since 2002

"My nephew made a really good game from some of the ZAP! information. The teachers assigned to each student that they had to make a book, a habitat, or make a game. He wanted to make the game. Other kids who didn't go to ZAP! kinda dreaded the project more than Luigi did. He was *really* excited about his animal project. ZAP! has fortified him with a lot of knowledge about animals. He didn't bring his project home right away because his teachers wanted to show it to another class."

ZAP! information used for school projects or reports (cont'd)

Nimbe, 14 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"When I was in a health / first aid class in 7th grade at the Orozco Academy, we had to do a report on injuries people could get. I chose snakebites, because I had been coming to ZAP! since 4th grade and I knew I could get information and help for my report here [ZAP!]. I talked about what the injury was, what type of snakes were poisonous, where they lived, what they looked like, what they ate, where the poison came from if it was a poisonous snake, what the symptoms were if someone was bitten and what remedies would heal the bite. I picked the Eastern Diamondback Rattlesnake, which is a poisonous snake and did a poster on it. I learned a lot about different snakes at ZAP! and about things that can happen to people and snakes. I read different library books and looked at information on the Internet to learn more about how bites can be treated. I had fun doing the report. It turned out pretty well!"

ZAP! information used in tests at school

Kristina, 8 y/o girl (West Belmont Branch) in ZAP! since 1999

"I used a fact that I learned at ZAP! on my spelling test at school. My teacher gave us the word 'enormous' and we had to put that word in a sentence. My sentence was 'The enormous elephant weights three tons' because that's what I learned at ZAP!"

Hugo, 8 y/o boy (Rudy Lozano Branch) in ZAP! since 2000

"What I learned about fish and geography at ZAP! helped me answer some questions on a test at school. Some of my friends got the questions wrong, but I got them all right. I remembered doing activities with Saira and that made me remember it."

Evelyn, 10 y/o girl (Rudy Lozano Branch) in ZAP! since 1997

"When I was in the 4th grade, I had an old Japanese teacher gave us a pop quiz! He gave us clues about what the answers might be to help us. One of the clues was "the land of the sun". I remembered what Saira said when she told us about Japan and I raised my hand and told the teacher "Japan". No one else knew it right away."

Miranda, 11 y/o girl (Rudy Lozano Branch) in ZAP! since 2000

"When Saira teaches us it's like studying. What she teaches us helps when I take tests and when I do projects."

ZAP! helps children answer questions when on school fieldtrips

Mr. D., parent of 9 y/o girl (Rudy Lozano Branch) in ZAP! since 2000

"I chaperoned a fieldtrip taken by Aisha's class at school. The teacher would ask students questions and Aisha would answer many of them."

Aisha, 9 y/o girl (Rudy Lozano Branch) ZAP! since 2000

"When my teachers took us to Lincoln Park Zoo for a fieldtrip she talked and told us about the animals. I told her what I learned about some of the animals from ZAP!"

ZAP! participants take ZAP! handouts or projects to school / show teacher

Mrs. Sk., parent, 5-1/2 old girl (West Belmont Branch) in ZAP! since 2000

"By the end of last year, Saira had an album of the different countries and the animals that lived there. The little ones at ZAP! colored pictures of animals, cut them out and pasted the pictures on paper. I had to help Julia select an animal picture and place it in the right country. Saira made an album out of the pictures. Julia was so proud of that album that she took it to her preschool class for a unit on animals and told her teacher, Mrs. Rodriguez, and the class about the animals she learned about in ZAP!."

Luigi, 10 y/o boy (Rudy Lozano Branch) in ZAP! since 2002

"Some of the cards we get from ZAP! we take to the teacher at school and talk about what we learned at ZAP!."

Fernando, 11 y/o boy (Rudy Lozano Branch) in ZAP! since 1997

"When we get those cards with information on them at ZAP! I take them to my teacher to show her what I learn."

ZAP! reinforces concepts learned at school and / or prepares children for subsequent learning

Mrs. R., parent of 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"ZAP! has influenced the words that Rachel uses. For example, she learned words like 'mammal, vertebrae, nocturnal' at ZAP! before many of her friends knew what those words meant."

Mr. and Mrs. D., parents of 9 y/o girl (Rudy Lozano Branch) in ZAP! since 2000

"When we do things at home or go places like a museum or the zoo, I try to reinforce concepts presented at ZAP!... Aisha learns things at ZAP! and then she might learn about it at school, too. She isn't as afraid of the new material at school because she already knows something about the topic from ZAP! programs. When she already knows it she feels more confident and she is more willing to work at learning even more at school."

Paree, 9 y/o boy (Austin Branch) in ZAP! since 2003

"I got a 'C' on another project I did with butterflies, reptiles and birds. In ZAP! we made butterflies on sticks. In my group [at school] for the project we had to study birds, reptiles and butterflies. I knew about butterflies because we did them in ZAP!."

Andreas, 10 y/o boy (Rudy Lozano Branch) in ZAP! since 1997

"When we do science at school, I already know stuff that the teacher is saying because I learned it at ZAP!. I don't get bored because I am hearing the same stuff two times. I learn it two times and then I understand it better."

Daniel, 10 y/o boy (Rudy Lozano Branch) in ZAP! since 2000

"We worked as a group in science and were showed pictures of habitats and pictures of animals and we had to match them up and tell which continents you could find them on. I learned that in ZAP! first so it made it easier to do the work at school."

ZAP! reinforces concepts learned at school and / or prepares children for subsequent learning (cont'd)

Alexandra, 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"When we studied China in school, I already knew a lot about where it was located, some of the animals that live there, what people do there, some things about their culture and what they eat because I learned it at ZAP! In science ZAP! helps me because I know more than the other kids about animals."

Mrs. Ro., parent 11 y/o girl (West Belmont Branch) in ZAP! since 1997

ZAP! is a wonderful supplement to information she learns or things that may not be taught, at school."

David, 12 y/o boy (Rudy Lozano Branch) ZAP! since 2000

"In school yesterday in science class we did the same project as we did in ZAP! today to see what currents in the ocean do to things that live in the ocean -- only we used ice instead of oil and spices. I told my science partner and my teacher what we did in ZAP! and how what we saw was different and the same."

ZAP! helps children do homework

Isabel, 4 y/o girl (West Belmont Branch) in ZAP! since 2000

"And you know what else I like? Fishes, the koi fishes that I learned at the library. I did a fish drawing of them for my homework."

Mrs. R., parent of 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"She certainly feels more confident in answering questions on her homework since she has attended ZAP!."

Mrs. Ro., parent 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"This year there is a homework assignment on topics that we've learned in ZAP!. Alexandria has learned to use resources more effectively since she's been in ZAP!. When she wants me to give her the answer, I tell her, 'you can't ask me, check your ZAP! information or look it up.' ZAP! is a wonderful supplement to information she learns or things that may not be taught at school."

David, 12 y/o boy (Rudy Lozano Branch) in ZAP! since 2001

Sometimes I am able to do my homework without looking things up because I *already* know the answer from ZAP!."

Mrs. V., parent of one 12 and two 10 y/o girls (Rudy Lozano Branch) in ZAP! since 1999

"The three kids communicate with each other about things they talked about in ZAP! and sometimes they answer each others' questions for homework because of something they learned in ZAP!."

ZAP! helps children do homework (cont'd)

Nimbe, 14 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"I've used a lot of the information I learned at ZAP! at school -- like when I know the answer to a question that the teachers asks or I am working on homework and don't have to look something up because I know it from ZAP!."

ZAP! helps children answer questions in class

Alexis, 6 y/o boy (Rudy Lozano Branch) in ZAP! since 2003

"My kindergarten teacher showed us a flag with a red dot on it and I told my teacher that it was the Japanese flag! I knew it from ZAP!"

Mrs. D., parent of 9 y/o girl (Rudy Lozano Branch) in ZAP! since 2000

"Aisha was able to answer questions at school and on a fieldtrip about butterflies and the migration of the Monarch due to the information in a ZAP! program and activity."

Daniel, 10 y/o boy (Rudy Lozano Branch) in ZAP! since 2000

"I answer more questions than other kids because I learned a lot of the answers in ZAP! with Saira."

David, 11 y/o boy (Rudy Lozano Branch) in ZAP! since 2000

"I'm positive that I learn very much from ZAP!. I know I have answered question at school because I learned it at ZAP! – especially in social studies and in science."

Juaniqua, 11 y/o girl (Austin Branch) in ZAP! since 1999

"Sometimes Mrs. Kwock gives us 'bonus questions' and we have to go home that night and find the answer to give her the next day. Today she asked a question about St. Patrick's Day and Saira gave us the answer at ZAP!. I'll get extra points at school tomorrow!"

Juaniqua, 11 y/o girl (Austin Branch) in ZAP! since 1999

"I really liked the poem we read at school called 'The Raven'. I told the class something about the ravens, birds and owls that I learned from going to ZAP!"

Alexandra, 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"I am able to answer a lot of questions the teacher asks in class because of things I've learned in ZAP!. It's helped me a lot in geography, history and science. When we studied China in school, I already knew a lot about where it was located, the animals that live there, what people do, some things about their culture and what they eat. In science, ZAP! helps because I know more than other kids about animals."

Victoria, 12 y/o girl (West Belmont Branch) in ZAP! since 1997

"In science, the teacher was talking about a weird animal, I think it was a dodo, and asked us if we knew about it. So, I raised my hand and told people it was a bird and where it comes from and what it eats and where it lives and the teacher asked where I knew that from and I told her I got it from ZAP!. I use things I learned in ZAP! in reading and social studies and science."

ZAP! helps children answer questions in class (cont'd)

Mario, 12 y/o boy (Rudy Lozano Branch) in ZAP! since 2003

"I especially use ZAP! in social studies and in science classes but it kinda depends on what we study."

David, 12 y/o boy (Rudy Lozano Branch) in ZAP! since 2000

"When my teacher at school asks questions about oceans and continents, I answer a lot because I learned all about those things at ZAP!."

Alma, 13 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"One day in social studies we talked about certain parts of the world and peoples' customs there. I knew about that from ZAP! so could answer a lot of questions and share things with my class."

Laura, 13 y/o girl (West Belmont Branch) in ZAP! since 1997

"Social studies and science are the two courses I use information from ZAP! in, but it depends on the teacher and what we are doing in school. My science teacher was a nature fanatic so when we did things about nature or the environment in science class, I sometimes already knew about it from ZAP!. That was a good feeling!."

Nimbe, 14 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"I've used a lot of the information I learned at ZAP! at school -- like when I know the answer to a question that the teacher asks or I am working on homework and don't have to look something up because I know it from ZAP!."

Ms. S., grandmother to two former ZAP! participants (Austin Branch) in ZAP! since 2000, who no longer come because they don't get out of school until 5:00 pm

"When my grandchildren attended ZAP!, they would talk about the ZAP! programs at school during show and tell when the teacher asked what they did over the weekend. The children would talk about the continents, the animals, what they ate and the type of people who lived there."

2. **Does participation in ZAP! programs promote quality family time or facilitate family interaction? Do ZAP! participants share information with siblings or friends? If so, in what way(s)?**

ZAP! influences words children use and what they want to know

Mrs. R., parent of 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"ZAP! has influenced the words that Rachel uses. For example, she learned words like 'mammal, vertebrae, nocturnal' at ZAP! before many of her friends knew what those words meant."

ZAP! comes up in conversation at home

Ms. B., grandmother of 12 y/o boy (Maywood) in ZAP! since 2003

"Just in three programs, I didn't realize they learned so much about geography. My, they were telling me where all sorts of things lived!"

Mrs. J., parent of two children (Austin Branch) in ZAP! since 2003

"ZAP! comes up in conversation at home – given something the kids heard on radio TV or saw on the computer. I encourage them by asking them what else they remember."

ZAP! promotes family discussion about careers or influences children's decisions about careers

Mr. Gu., parent of 8 y/o girl (West Belmont Branch) in ZAP! since 1998

"My 8 y/o daughter and I talk about what she wants to be when she gets older. ZAP! exposed her to nature / various types of careers, like being an educator at the zoo."

Mrs. O.-R., parent of 12 y/o girl (West Belmont Branch) in ZAP! since 1997

"Victoria wants to be a veterinarian when she grows up. She has been greatly influenced by what she has learned at ZAP!."

Families schedule activities around ZAP! programs

Mrs. Jo., parent of two children (Maywood) in ZAP! since 2003

"We were running late today [2/14/04] and the kids were so worried they would miss ZAP! We try to schedule ZAP! first and then schedule our errands and other activities around ZAP!"

Mrs. P., parent of 4 y/o girl (West Belmont Branch) in ZAP! since 2002

"We did ZAP! as a family but sometimes my husband has to work. Then Isabel and I go. The information from ZAP! is so wonderful. It's so nice to go to something as a family and not be by ourselves. We're with a group and can learn from them and from Saira. I know my children are safe and in good hands when we go to ZAP!."

Mrs. R., parent of 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"Rachel does not want to miss ZAP!. She prepares for the whole week like it's a countdown to ZAP!. She counts the number of programs she has been to before she has 'earned' a ZAP! trip! She loves to anticipate what will happen at the programs."

Mrs. Ro., parent of 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"We live by the ZAP! schedule! Alexandra marks her calendar because it is important to her and she takes ZAP! very seriously. This year there is a homework assignment that is age appropriate. There are questions and she turns them in; she's testing herself on the things she learns. I tell her, 'You can't ask me, you have to learn by looking things up.' ZAP! is a wonderful supplement to information she learns or things that may not be taught at school."

ZAP! teaches participants to take action

Benito, 6 y/o boy (West Belmont Branch) in ZAP! since 2000

"We want to do recycling because we want to be kind to the earth."

Mrs. R., parent of 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"Rachel keeps a private journal and writes in there how she feels about things. She also has her own album of ZAP! fieldtrip pictures."

Aisha, 9 y/o girl (Rudy Lozano Branch) in ZAP! since 2000

"I learned that if you touch a butterfly wing, then it can't fly anymore. It's very sad so I tell people not to touch butterflies that when I see them touch one. When I was at ZAP! I made a bear in one of the crafts at ZAP! and gave it to my cousin."

Mr. D., parent of three children (West Belmont Branch) in ZAP! since 2000

"One of my sons used an insect collecting kit (that had a magnifying glass in it) to learn more about insects. He was fascinated by insects from one of the ZAP! programs. He also checked out a lot of books from the library on insects. Anytime someone shows an interest in something, we encourage them to get as much information as they can about it and then it's on to the next thing!"

Mrs. F-S., parent of 11 y/o girl (Rudy Lozano Branch) in ZAP! since 1996

"When we go to the beach in the summer on Lake Michigan, we see birds, often with hooks in their mouths or injured legs. Tori made me call the city and ask them to make sure the birds got care."

"ZAP! has made Tori more conscious about conservation and recycling. She will tell me 'Mom, you're using too much paper!' ZAP! has had a remarkable effect on my daughter. After studying the environment and doing things like cleaning up the river on ZAP! fieldtrips, she will see cans on the sidewalk, pick them up and put them in the garbage in the alley where someone might find them and recycle them."

Bradley, 12 y/o boy (West Belmont Branch) in ZAP! since 1999

"I try not to step on insects like other kids do because of what I learned at ZAP!"

Alma, 13 y/o girl (Rudy Lozano Branch) in ZAP! since 1997

"I invited some of the kids in my classroom to ZAP! so that they can learn what I'm learning."

Laura, 13 y/o girl (West Belmont Branch) in ZAP! since 1997

"ZAP! makes me want to read and use the animal books I have at home." [Mother said that ZAP! prompts them to buy books the children are interested in.]

Matthew and Laura, 9 y/o boy and 13 y/o girl (West Belmont Branch) in ZAP! since 1997

"We made origami paper cranes in ZAP! Our school librarian was going to Japan and told us a Japanese girl thought if she got 1,000 paper cranes she would get her wish. So, we made some paper cranes out of origami for the librarian to take to the girl."

ZAP! promotes reading at home

Mrs. Ro., parent of 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"Alexandra has won several educational books about animals and nature from a raffle at ZAP! These books make her pleasure reading very informative. We talk about some of the things she reads in her books and remember what Saira told us about them at ZAP!."

Alma, 13 y/o girl (Rudy Lozano Branch) in ZAP! since 1997

"I've won some *really* neat books in the raffle at ZAP! I like reading them and read them to my brothers and sisters."

Talk with family about ZAP! while watching nature programs or movies

Aryana, 7 y/o girl (Maywood) in ZAP! since 2003

"At ZAP! we talked about different fish and when we go home and watch my video of Nemo, I can name who the fish are in the movie and tell my friends what color the fish is, what he eats and where he lives."

Mrs. L., parent of 7 and 11 y/o boys (Rudy Lozano Branch) in ZAP! since 2003

"It's so nice to have the two children want to spend 1-1/2 hours learning! When we watch Discovery Channel and Animal Planet sometimes we'll laugh and look at each other and say 'we learned that at ZAP!'."

Mrs. R., parent of 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"Before ZAP!, Rachel showed no interest in watching programs on PBS. Now, if I'm watching something like Globe Trekker on PBS, she will say 'Oooooohhhh, we learned about that in ZAP!' and will sit down with me to watch it and talk with me about what she remembers from ZAP!. One program was on the Galapagos Islands and they showed animals and birds that Saira taught us in ZAP!."

Terrence, 10 y/o boy (Maywood) in ZAP! since 2003

"At home we talk about what we learn in ZAP! -- especially if we are watching a nature or geography program. I really haven't used any of the ZAP! information in school yet because we just started coming to ZAP!."

Mrs. V., parent of two boys and two 10 y/o daughters (Rudy Lozano Branch) in ZAP! since 1997

"The three kids watch TV on Channel 20, and they love National Geographic. If the program is about something they talked about in ZAP!, they will say, "Do you remember when Saira told us...?" and share whatever they remember or liked about that ZAP! program."

ZAP! promotes intentional family conversations

Mrs. Mo., parent of 5 y/o girl (Rudy Lozano Branch) in ZAP! since 2002

"We practice the alphabet using names of animals that begin with a certain letter -- animals that we learn about in ZAP!. I will say 'Remember the alphabet? B is for...!' and then Kimberly will say 'Butterflies!' I try to take extra materials home from ZAP! with us so that we can do the activity again. I can take more time to try to do it and explain to her about what's going on. We really enjoy what we learn!"

Mrs. Sk., parent of 5-1/2 y/o girl (West Belmont Branch) in ZAP! since 2000

"Julia and I, we work together and talk about ZAP! at home. When she was younger, I talked with her about not being afraid of the animal skins or the live animals. Now that she is older and not afraid, we talk about the projects she does at ZAP! I cannot throw them out. We hang them up around the house and save them for a *long* time. Sometimes when we are just talking about things I ask her a question and I am so surprised she knows the answer! Then I remind myself and say 'Ah, yah, ok, she learned it at ZAP!."

Mrs. R., parent of 7y/o girl (West Belmont Branch), in ZAP! since 2001

"When Rachel was younger we would do ZAP! things at home. I would get out the globe and spin it. She would put her finger out to stop the spinning and point to a country. She would ask me questions -- What country is it? What do they eat there? How do they dress? What animals live there?"

Mrs. B., parent of 7 and 8 y/o boys (Rudy Lozano Branch) in ZAP! since 2002

"The information me and my boys learn at ZAP! is not solely for my boys but for me, too. I remember things that I had forgotten. I take every piece of paper we get at ZAP! and put it in a book and I use this book to talk about things with my boys. We just talked about the Julius butterflies and how we learned about the different stages of development, like crystallis and metamorphosis."

Mrs. H., parent of 9 y/o boy (Rudy Lozano Branch) in ZAP! since 2003; teacher, Jose Clemente Orozco School Community Academy

"Leo is in 3rd grade. He will sit and read articles and books for hours, especially about animals. We have conversations where he makes associations between things he's learned at school or ZAP! and things he is learning now. I know he has drawn a conclusion when he says to me, for example, "See mom, this is why the polar bear lives where it is cold."

Mrs. S., parent of 10 y/o boy (Rudy Lozano Branch) in ZAP! since 2002

"On the day of ZAP! we touch lightly on the subject. We all enjoy animals and the kids love animals. At home we often get the cards from ZAP! out and the kids talk about what they've learned or what they remember. As I sit there, I learn a lot. They make it interesting for adults and kids."

ZAP! promotes intentional family conversations (cont'd)

Mrs. Ro., parent 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"We talk about some of the things she reads in her books and remember what Saira told us about them at ZAP!."

Mrs. Lo., parent of 16 y/o boy and 11 y/o girl (Austin Branch), in ZAP! since 1999

"Both children love animals and we talk about what they've learned at ZAP! and about what programs and fieldtrips are coming up."

Stephan, 16 y/o boy (Austin Branch) in ZAP! for since 1999

"I was in ZAP! about 3 years. I love animals. I went to swap meets and got tiger's teeth, shark teeth, feathers and things related to animals. I've given talks at the Garfield Park Conservatory and the Town Hall about animals. I put on shows and demonstrations on the front porch for my family and friends. I kind of make the porch into a stage with little exhibits and show people in the neighborhood some of my animal things and talk about them. We have two cats, Parker and Mylo, and I talk about their behavior and show their features -- things that make cats different. I explain how this might give them advantages and disadvantages from other species."

Talk with friends about ZAP! content

Kristina, 8 y/o girl (West Belmont Branch) in ZAP! since 1999

"When I go with my friends to the zoo, I like to tell them things about the animals that I learn at ZAP!. This week we learned about turtles. We cut out and colored and taped things together. I used a bowl for, you know, the shell because it was rounded like the turtle. I told my friends about the turtle and that there are bumps on the turtle shell and that the color was sort of brown and greenish and the head was really tiny. I learned that at ZAP!."

Omar, 8 y/o boy (West Belmont Branch) in ZAP! since 2002

"I have told some of my friends about what we talk about in ZAP!. I told my friend Zachary all about the cool cobras in India."

Stephan, 16 y/o boy (Austin Branch) in ZAP! since 1999

"I put on demonstrations on the front porch for my family and friends. I make the porch into a stage with exhibits to show people in the neighborhood some of my animal things and talk about them. We have two cats, Parker and Mylo, and I talk about their behaviors and show their features -- things that make cats different. I explain how this might give them advantages and disadvantages from other species."

ZAP! creates memories

Mrs. Va., parent of 9 y/o boy (Austin Branch) in ZAP! since 2003

"Sometimes things we do at home or for fun remind us of things we did at ZAP! We'll be taking a picture and say 'remember that time we took an Owl Walk at the Indiana

Sand Dunes? We took pictures of the Black Oak Tree and saw how creatures lived at the dunes and how people survived in the wilderness."

3. Does participation in the ZAP! program stimulate curiosity in a topic or an interest in world events? If so, in what way(s)?

Mrs. Sk., parent of 5-1/2 old girl (West Belmont Branch) in ZAP! since 2000

"By the end of last year, Saira had an album of the different countries and the animals that lived there. Julia has learned information about countries, customs, animals and languages that she would never have learned thus far at school. ZAP! is an amazing program."

Mrs. R., parent of 7 y/o girl (West Belmont Branch) in ZAP! since 2001

"Since ZAP!, Rachel asks a lot of questions about the origins of things. I just bought a world map that Rachel asked me to buy so she could find where things were. Now I have to get it laminated! Before ZAP!, Rachel showed no interest in watching programs on PBS. Now, if I'm watching something like Globe Trekker on PBS, she will say 'Oooooohhhh, we learned about that in ZAP!' and will sit down with me to watch it and talk with me about what she remembers from ZAP!. One program was on the Galapagos Islands and they showed birds that Saira taught us in ZAP!."

Mrs. Ro., parent of 11 y/o girl (West Belmont Branch) in ZAP! since 1997

"Alexandra's knowledge of geography and cultures of many countries has grown through ZAP! -- especially her map skills and looking things up. I remember her coming home from school and telling me that no one in her class knew where Great Britain was, but she remembered where it was from a ZAP! program last year and told the class about it."

Tori, 11 y/o girl (Rudy Lozano Branch) in ZAP! since 1996

"Saira talked about seed germination at ZAP! and we planted bean seeds at ZAP!. Saira talked about how if you freeze the seeds or boil the seeds that they won't grow right or at all. I was really pretty interested in what she was saying so I decided to do my science fair project in 3rd grade on seed germination and see which seeds grew or did not grow much or did not grow much at all after I did something to them."

Mrs. Sa., parent of 12 y/o boy (Rudy Lozano Branch) in ZAP! since 2003

"Mario likes to investigate things more since he goes to ZAP! -- to do research about things and especially to ask questions about animals, find out where in the world they live, what they eat, what people are like and find out about their cultures."

Mr. G., parent of 12 y/o boy (Rudy Lozano Branch) in ZAP! since 1999; teacher at Washington Irving School

"ZAP! has helped Bradley make sense of both the plant and animal worlds. ZAP! has also piqued his interest in world issues." "ZAP! has helped our family provide a structured, fun way of learning about international issues and about how to care for animals and the environment. We live an intentional lifestyle. We reinforce at home concepts he learns in programs like ZAP!. We try to teach Bradley that all animals and insects are your pets so he learns to care for living things. We try to continue

your [ZAP!'s] spirit to expose him to many things and stress the most important thing is protection and preservation. ZAP! heightens Bradley's awareness and sensitivity to issues around the world."

3. Does participation in the ZAP! program stimulate curiosity in a topic or an interest in world events? If so, in what way(s)? (cont'd)

Victoria, 12 y/o girl (West Belmont Branch) in ZAP! since 1998

"I did a lot of reports on animals that I learned about in ZAP!. I got a lot of extra materials and books out from the library to use in my reports also."

Nimbe, 14 y/o girl (Rudy Lozano Branch) in ZAP! since 1998

"I learned so much about so many different countries and about the people and animals that live there -- what they eat, how they live, what they do, what their culture is like."

4. From the point of view of teachers and librarians, how do young people and their families benefit from the ZAP! program?

ZAP! staff use the best teaching methods, approaches and materials

Ms. Walters, art teacher, preK-8th, Chicago Academy, ZAP! Community Advisory Board member (West Belmont Branch) since 2003

"What I *really* like about ZAP! is it teaches concepts in context. ZAP! staff give children information about animals, nutrition and habitat *plus* combine that with information about a country, geography, people and culture. Children don't just learn about animals in isolation."

Mrs. H., parent of 9 y/o boy (Rudy Lozano Branch) in ZAP! since 2003; teacher, Jose Clemente Orozco School Community Academy

"Leo gets a chance to feel pelts and learn about animals. He also gets a chance to ask questions and play a game to apply what he's learned."

"During the ZAP! program I attended with my son, I found myself asking, 'Can I invite my whole class to come to ZAP!?' I *really* like the hands on activities, particularly the differentiated learning. Before the program actually begins, in the pre-knowledge phase, ZAP! allows kids to explore and think about things -- to look at pictures, puzzles and artifacts to discover something new and process it by relating it to their past experiences."

"ZAP! gives children new information and encourages them to test it out by asking questions, applying it to an activity, and by sharing it with others. ZAP! allows children to explore and to learn at multiple levels by looking, touching, asking questions, creating something, interacting with the teachers and with other children. Most of the time, children just listen in a learning situation. ZAP! *involves* children in the process."

“ZAP! excels in teaching concepts related to geography. Kids learn where animals are found and can see the habitat in the context of the local geographic environment. ZAP! allows the parent and child to participate in the program together, to learn together. A partnership develops in which the mom and the dad work with their kids to learn and to make things.

ZAP! staff use the best teaching methods, approaches and materials (cont'd)

Mrs. H., parent of 9 y/o boy (Rudy Lozano Branch) in ZAP! since 2003; teacher, Jose Clemente Orozco School Community Academy (cont'd)

"ZAP! staff ask questions that require an open-ended response, not just a yes or no. This develops skills in critical thinking, something required by all subjects in school. ZAP! improves listening skills, because children need to take in what is said to best respond to questions and to fully participate in all activities.

"ZAP! gives books to children. ZAP! staff read to children or ask children to read during the program. These opportunities help improve reading comprehension. ZAP! often teaches several words in the language of whatever country they are studying that month. This promotes awareness of and some fluency in another language.

"Role playing provides children with an active outlet for their creativity, knowledge and interpersonal skills. I saw children pretend they were an animal, acting out the types of food they ate and how they found food. Children asked questions of each other and ZAP! staff, leaving with lessons learned."

Mrs. F-S., parent of 11 y/o girl (Lozano Branch) in ZAP! since 1996
"ZAP! is talking, showing and involving so information sinks in better."

Mrs. O.-R., parent of 12 y/o girl (West Belmont Branch) in ZAP! since 1997; teacher, Pulaski Fine Arts Academy

"ZAP! teaches kids in a different environment from that at school, which makes it easier for some kids to learn. All the activities are age appropriate and hands-on, which is great. Saira gets the older kids to assist the smaller children which teaches them responsibility and caring for others."

Mrs. Sk., parent of 5-1/2 y/o girl (West Belmont Branch) in ZAP! since 2000; teacher, Reinberg School

"ZAP! makes a great impact, especially in the subject of geography. When Saira teaches she takes a map and shows us where things are. She uses models and pictures and samples of animal hair and skin. The live animals she brings in make a lasting impression. All of this makes it easy for children to visualize and remember this information when they are presented with this information again in school."

Mr. G., parent of 12 y/o boy (Rudy Lozano Branch) in ZAP! since 1999; teacher at Washington Irving School

"Saira knows the information. She's prepared. ZAP! staff apply best practices to their teaching. Kids are divided by age, so they can be successful in what they do. Saira connects past ZAP! program content to new program content and connects all of that to a child's life in Chicago and the suburbs.

"Saira relates new, unfamiliar content to familiar concepts – asking questions to get kids to think for themselves, like "What do you know? Now think about this. What could that mean? -- trying to get kids to think ahead a bit. Kids come away understanding the importance of quantifying information."

ZAP! staff use the best teaching methods, approaches and materials (cont'd)

Mr. G., parent of 12 y/o boy (Rudy Lozano Branch) in ZAP! since 1999; teacher at Washington Irving School

"Another good thing about ZAP! is that it uses the same staff during each program. Kids, parents and staff get to know, trust and feel comfortable with each other, which promotes a good learning environment."

Ms. R.S., Children's Librarian (Rudy Lozano Branch)

"ZAP! is geared for so many age groups. Often Saira or a volunteer reads an animal story to younger children, where my 3 y/o son is, and does activities just with them."

Ms. St., Children's Librarian (West Belmont Branch)

"ZAP! is well organized and taught in a way that keeps people thinking about the material long afterwards."

ZAP! promotes planning and time management skills

Mrs. Sk., parent of 5-1/2 y/o girl (West Belmont Branch) in ZAP! since 2000; teacher at Reinberg School

"Julia has to plan clothes to wear because Saira says "we go in any weather! Julia also figures out how much money she needs to take. She has to allow time to make a lunch for fieldtrips and gather necessary supplies for overnight trips."

Mr. G., parent of 12 y/o boy (Rudy Lozano Branch) in ZAP! since 1999; teacher at Washington Irving School

"ZAP! also teaches Bradley about being on time, preparing for trips and class sessions and prompts him to keep track of his schedule."

ZAP! promotes socialization skills

Mrs. Sk., parent of 5-1/2 y/o girl (West Belmont Branch) in ZAP! since 2000; teacher, Reinberg School

"Julia's made friends at ZAP! that we've invited to her birthday party. We met friends at ZAP! that we invite to our home. I met one of the mother's at ZAP! who has become a great friend. We go to church and on some ZAP! fieldtrips together -- we don't just see each other at ZAP! programs."

Mrs. R., parent 7 y/o girl (West Belmont Branch) in ZAP since 2001

"Rachel and I see the same children and grownups at ZAP! when we go. It creates a community that, as an only child, Rachel doesn't have. It's also good for her to see people from different cultures at ZAP! programs so she becomes familiar with peoples' differences and it's not something strange as she grows up."

ZAP! promotes awareness of diversity and other cultures

Mrs. R., parent 7 y/o girl (West Belmont Branch) in ZAP since 2001

It's good for her to see people from different cultures at ZAP! programs so she becomes familiar with peoples' differences and it's not something strange as she grows up."

Rachel, 7 y/o girl (West Belmont Branch) in ZAP since 2001

I named my doll 'Kenya'. I had been to ZAP! and we learned about some of the culture in Africa and my doll has dark colored skin so I named her Kenya. It's good to learn about people from other places around the world and how we are different than them and the same."

5. What effect, if any, does the ZAP! program have on the use of school library or public library resources? What do librarians observe as benefits from ZAP!?

The children's librarian at each of the four public libraries was contacted once in fall 2003 and once each in winter / spring of 2004.

ZAP! draws people into the public libraries year round

Ms. F., Children's Librarian (Maywood Public Library)

"Once people come to ZAP!, they usually come again. The problem is getting families to become involved, a problem because the world is too scheduled."

Ms. R. S., Children's Librarian (Rudy Lozano Branch)

"The Mondays and Saturdays of ZAP! programs are some of our busiest days. People in this area don't get out of the neighborhood often. They call and say 'I heard you have a program that goes on fieldtrips.' I tell patrons about ZAP!. They love being able to come to the library for the programs and then go to the zoo or to another museum."

ZAP! is a bilingual program

Ms. R. S., Children's Librarian (Rudy Lozano Branch)

"People love the fact that ZAP! is bilingual and usually cannot wait to sign up."

More ZAP! families use libraries as a resource than do non-ZAP! families

Ms. R. S., Children's Librarian (Rudy Lozano Branch)

"Families are very loyal to ZAP!. Kids and their parents stick around the library after ZAP! to do research, read or find books to check out related to ZAP! topics. I notice that kids in the ZAP! program are more likely to come into the library more often than kids not attending ZAP!."

More ZAP! families use libraries as a resource than do non-ZAP! families (cont'd)

Ms. St., Children's Librarian (West Belmont Branch)

"ZAP! brings people into the library. What I have noticed since ZAP! began is that parents and their kids come early and stay later at the library on ZAP! days. Although I am unable to quantify this, I have observed that children in ZAP! do read more books about animals and nature than children who do not attend ZAP!."

Mr. D., parent of three children (West Belmont Branch) in ZAP! since 2000

"My son checked out a lot of books from the library on insects after a ZAP! program.. Anytime someone shows an interest in something, we encourage them to get as much information as they can about it."

Mr. G., parent of 12 y/o boy (Rudy Lozano Branch) in ZAP! since 1999

"Bradley has checked out more science books since participating in ZAP!."

Victoria, 12 y/o girl (West Belmont Branch) in ZAP! since 1997

"I used ZAP! in 5th grade. At the end of every month we had to turn in a report for science class. I did a lot of reports on animals that I learned about in ZAP!. I got a lot of extra materials and books out from the library to use in my reports."

DISCUSSION

The ZAP! program is held in high esteem by parents, children, librarians and teachers alike. Although the program is most active at the Chicago Public Library-Rudy Lozano Branch and the Chicago Public Library-West Belmont Branch, ZAP!; Members of the Community Advisory Boards at the Maywood Public Library and the Chicago Public Library-Austin Branch are working hard to encourage more families to attend ZAP! programs.

Attendance at only one ZAP! program makes a difference! If adults or children found they could apply what they learned in ZAP!, they did. There was no correlation between the number of years children and adults attended ZAP! and the frequency or way in which ZAP! information was used.

The Children's Librarian from the Chicago Public Library-Rudy Lozano Branch states that ZAP! "draws people into the libraries year round" and that her library had some of its busiest days on ZAP! program days. She notes that, "kids and parents stick around the library after ZAP! to do research, read or find books to check out related to ZAP! topics. Kids in the ZAP! program are more likely to come into the library more often than kids not attending ZAP!."

The Children's Librarian at the Chicago Public Library-West Belmont Branch has also noticed that ZAP! families seem to spend more time at the library on ZAP! program days. All four children's librarians enjoy being able to tell patrons about the ZAP! program and report that parents *love* the fact that ZAP! is a bilingual program. Although ZAP! is relatively new at the Maywood Public Library, the children's librarian said that "once people come to ZAP!, they usually come again", adding that many families are over scheduled and therefore may not have the time to get involved in one more thing.

Many parents try to schedule their work schedules and family activities around the ZAP! program schedule. The extended family also becomes involved with ZAP!, as aunts, uncles, grandmothers and grandfathers attend ZAP! programs or use ZAP! material at home. ZAP! has even stimulated several children to read more at home. Says one 13 year old girl who attends ZAP! at the Rudy Lozano Branch, "I like reading them ([books won at ZAP! raffle] to my brothers and sisters." The mother of an 11 year old girl who attends ZAP! at the West Belmont Branch says, "These books [won at ZAP! raffle] "make her pleasure reading more enjoyable."

Teachers and teachers who are also parents of ZAP! participants state that ZAP! unequivocally applies best practices in teaching its concepts and lessons. For example, the teachers unanimously agree that ZAP! teaches in a context using hands on, engaging experiences. ZAP! uses the teaching approaches of inquiry based learning and problem based learning, among others. ZAP uses multi sensory approaches to teaching, appealing to the many ways that people take in information, including vision, touch, smell, taste, hearing and kinesthetically through physical activity.

ZAP! promotes both individual and team based learning. ZAP! promotes critical thinking. ZAP! uses different teaching methods including demonstrations, role plays, discussions, observations, short lectures, questions, individual and team activities. ZAP! uses age appropriate activities. It is bilingual, which has an enormous appeal to participants. ZAP! encourages participants to explore artifacts and materials before the program and to ask questions. ZAP! then proceeds to answer some of those questions during the program and to help participants connect the familiar to the unfamiliar.

ZAP! promotes use of the zoo and zoo educators as a resource or, at the very least, the ZAP! educators as a resource for activities, school projects and reports. Several families from each of the three public library branches stated they have asked ZAP! staff for information, photos, ideas and other resources to use for school projects or simply for activities to do at home with their children.

Parents, teachers and librarians applaud the fact that ZAP! uses the same staff and docents for each program, which fosters trust and rapport between the children and ZAP! staff. Parents report that, due to this consistency in teachers, children feel more comfortable each time they attend ZAP! and therefore feel freer to participate.

Teachers who are also parents of ZAP! participants state that ZAP! allows children to test out new information and apply it to an activity, explore, ask questions, make things, develop skills in critical thinking, improve listening skills, improve reading comprehension and learn words in a new language.

ZAP! participants use the information in many ways; the information is useful to both adults and children, regardless of age, grade, school, community or number of years in ZAP!. Attendance at only one ZAP! program makes a difference! If adults or children found they could apply what they learned in ZAP!, they did.

In the formal school setting, ZAP! information seems to be applied most often in classes related to geography, math, science, history, social studies and 'show and tell' for children in younger grades. One 11 y/o girl, who attends ZAP! at the Austin Branch, however, shared ZAP! information about birds with her English class during a reading of 'The Raven'.

One teacher and other teachers who are also parents of children who attend ZAP! note that ZAP! presents children with an opportunity to learn in a non-school environment. According to a teacher at Chicago Academy, "ZAP! teaches concepts in a context...not just animals in isolation". Another teacher, at the Orozco School, states that "ZAP! excels in teaching concepts related to geography...ZAP! asks questions that require open-ended responses, which develops skills in critical thinking. ZAP! improves listening skills, because children need to take in what is said to fully participate in all activities."

It came as no surprise that, unless a teacher attended ZAP! with his / her own children, teachers, overall, are unaware of the ZAP! program. This is most likely due to ZAP! being an outreach program presented by Brookfield Zoo at three branches of the Chicago Public Library and at one suburban library -- not a program presented in the schools.

There was no correlation between the number of years children and adults attended ZAP! with the frequency or way in which ZAP! information is used. Some ZAP! participants apply what they learn in ZAP! to learning in formal academic settings while others use the information in social or informal settings.

ZAP! teaches children, and some adults, to take action. ZAP! was instrumental in providing two children with experiences that served as a prerequisite to volunteer and work programs at Brookfield Zoo. One mother from the Rudy Lozano Branch notes her 11 year old daughter was 'more conscious about conservation and recycling'. This same young girl also prompts her mother to notify the city about injured birds on the beach. Another 13 year old girl from the Rudy Lozano Branch invited peers from her classroom to attend ZAP! because she felt strongly that 'they needed to learn what she was learning in ZAP!'. A third grader from the Rudy Lozano Branch now cautions people not to touch a butterfly, because she learned that once a wing is touched, the butterfly cannot fly again. A 12 year old boy from the Rudy Lozano Branch no longer stomps on insects crawling on the sidewalk because of things he learned at ZAP!. A mother who attends ZAP! at the West Belmont Branch now buys more books on animals and nature, an interest ZAP! programs stimulated in her two children.

ZAP! also promotes intentional family conversations at home about nature, animals and issues around the world. Several 7 and 11 year olds are now intrigued enough about nature and animals to sit with their mother and watch programs on PBS, the Discovery Channel or Animal Planet. Children also talk with their friends about things they learn at ZAP, things that come up, for example, when playing, going places or doing homework. ZAP! prompted one 16 year old boy from the Austin Branch to turn his porch into a stage where he presented talks on animals to family, neighbors and friends.

ZAP! activities create memories that both adults and children look back on and enjoy. One family at the Austin Branch has fond memories of the Indiana Dunes overnight fieldtrip while a 7 year old girl from the West Belmont Branch now has her own photo album filled with ZAP! fieldtrip pictures.

ZAP! stimulates participants' curiosity and increases their knowledge of world issues and events. Many parents express absolute amazement at the knowledge their children gained from attending ZAP! programs. As the parent of a 5-1/2 year old girl from the West Belmont Branch notes, "When we are just talking about things, I ask her a question and I am so surprised she knows the answer! Then I remind myself and say 'Ah, yah, ok, she learned it at ZAP!'" An 11 year old girl from the Rudy Lozano Branch was intrigued by a ZAP! lesson about elements that effect seed germination and decided to use that as a topic for her science fair project at school. A parent of another 11 year old girl from the West Belmont Branch stated her daughter's "knowledge of geography and cultures of many countries has grown through ZAP!" One 7 year old girl from the West Belmont Branch asked her mother to go out and buy her a world map so she "could find where things were." The girl even demanded that her mother laminate the map! Mother noted that her daughter asks more questions about the origins of things since attending ZAP!.

Several parents note that preparing for ZAP! programs gave their children an opportunity to learn and to practice both planning and time management skills. A teacher who is also the parent of a 5-1/2 year old girl in ZAP! at the West Belmont Branch states that "Julia has to plan clothes to wear because Saira says we go [on fieldtrips] in any weather. Julia figures out how much money she needs to take. She has to allow time in the morning to make a lunch and gather necessary supplies for an overnight trip." Another teacher, who is also a parent of a 12 year old boy who attends ZAP! at the Rudy Lozano Branch, states that "ZAP! teaches Bradley about being on time, preparing for trips and keeping track of his schedule."

ZAP! offers parents an opportunity to become partners in their child's learning. And, it gives parents a glimpse into ways in which they can engage their child in learning at home. ZAP! gives children an opportunity to teach their parents as well as other children since ZAP! staff encourage older children to assist the younger ones during the program.

ZAP! promotes socialization skills – of children with other children and children with adults. Parents who school children at home and parents of an only child note that ZAP! creates a community that exposes their children to others. In so doing, both children and adults receive a heightened awareness of people from diverse cultures who are different from themselves. A 7 year old girl from the West Belmont Branch exclaims that her doll has dark colored skin. She had just been to a ZAP! program and learned about African culture so she named her doll Kenya, commenting that "It's good to learn about people from other places around the world and how we are different than them and the same."

Children use information from the ZAP! program in academic assignments, tests, reports, poster board projects and presentations at school. ZAP! influenced one child to view social studies as his favorite subject at school. ZAP! seems to be used and applied most often in the subjects of social studies, history, geography, math and science.

Parents use ZAP! material to home school their children. ZAP! material reinforces concepts other children learn at school and prepares children for subsequent learning at school. ZAP! material helps children do their homework; and answer questions in class, complete tests or share information on school fieldtrips. Children include ZAP! information in school projects

and reports. Children are eager to take ZAP! handouts or ZAP! activities to school to show their teacher.

SUMMARY

Overall, teachers, parents, librarians and children enjoy ZAP! and learn a lot. ZAP! is not just about animals' habitats, care and nutrition. Nor is ZAP! just about geography.

ZAP! is a comprehensive program that stimulates participants' curiosity about the natural world and knowledge about world events. ZAP! exposes participants to people of other cultures who have different customs and speak different languages. ZAP! teaches participants about culture, social customs, preferred foods, music, crafts and art. ZAP! promotes awareness of diversity and a respect for differences.

ZAP! brings people together from the community. ZAP! participants make new friends and get together with these new friends outside of the ZAP! program. ZAP! provides a structure around which people in a community come together to learn and to socialize. Children learn to communicate with others unlike themselves -- adults and other children alike.

Parents who participate in the ZAP! program report learning techniques and activities to engage their child in learning at home. Children practice problem solving, inquiry, reading and listening skills at ZAP! programs. Children develop and practice time management skills, planning and scheduling skills in preparation for attending ZAP! programs.

ZAP! positively influences academic work; positively influences family interactions, interests, discussions and activities; teaches children to take action to protect plants, animals and the environment; stimulates curiosity and interest in volunteerism and career paths; promotes acquisition of skills in play, time management, reading, socialization and use of resources; stimulates interest in and knowledge about diversity, culture and world events; and draws families into branches of public libraries year round while stimulating families to use the libraries and Brookfield Zoo as resources.

FUTURE CONSIDERATIONS

ZAP! is currently an educational outreach program for families in four Chicago area communities. Each community in which ZAP! is offered has its own issues and idiosyncrasies. There are not many parent or adult participants at the Chicago Public Library-Austin Branch, which means that it is difficult to get parent permission for children to go on ZAP! fieldtrips. ZAP! staff may want to do a cost / benefit analysis or assess whether continuing ZAP! in its current form is worthwhile at the Austin Branch. ZAP! staff may ultimately decide to develop alternative programming to present at the Austin Branch.

Attendance at the Maywood Public Library has been slow to increase. The program there is still relatively new and ZAP! staff may want to give families more time to become aware of the program. ZAP! staff may want to talk with the children's librarian at the Maywood Public Library to identify additional strategies for marketing ZAP! to Maywood audiences. These same strategies, once developed, may be successful in other communities as well.

ZAP! staff may want to review the recruiting practices to date for the ZAP! program. What is the best way to get families to participate? Is there a better way to get the attention of parents or families already at the library?

There are some ZAP! participants who apply what they've learned in formal academic settings while other participants use the information in social or informal settings. Do ZAP! staff want to focus on learning outcomes in one setting over another?

Two respondents indicated that ZAP! stimulated them to think about career choices. ZAP! could be modified, or content extracted from ZAP! program lessons to focus on careers such as those in nutrition, environmental science, conservation, animal husbandry or research. ZAP! staff could prepare a list of career resources containing websites, print and multimedia sources on ZAP! related careers and distribute to other audiences or create some type of ZAP! extension program.

ZAP! staff could think about offering several levels of ZAP! programs, each with a slightly different focus, audience or outcome. ZAP! staff could, for example, modify ZAP! material into presentations at senior centers or assisted living facilities, like The British Home or the Scottish Home, both nearby Brookfield Zoo.

ZAP! staff could take ZAP! material and create manuals or booklets on each topic or lesson. These manuals could then be sold to teachers for supplemental use in their classroom. These same manuals could also be used as the basis for teacher training workshops presented at the zoo or at schools to teams of teachers. Depending on the context in which the training was done and over what period of time, zoo staff could also train teachers in pedagogical methods used in ZAP! (i.e., multi-sensory teaching or teaching to the multiple intelligences), demonstrating how ZAP! content applies across their curricula.

It is not surprising that classroom teachers are unaware of the ZAP! program, since the program is held at branches of the public library. If ZAP! staff want teachers to be aware of the ZAP! program, the teachers will have to remain in their room when ZAP! staff partner with library staff to visit and recruit program participants from school classrooms. Similarly, the ZAP! program could be packaged into curricula at different grade levels and presented in a teacher's classroom on a fee for service basis. All ZAP! content, of course, would be aligned with the academic standards.

There are certainly many possibilities for and extensions of the ZAP! program. As with any program, the logistics are complex. The comments in this section are not meant in any way to diminish the existing program, which is soundly delivered in accordance with its mission. Rather, these comments are presented as issues to stimulate thought, as educators at Brookfield Zoo think about new audiences, new programs or new directions.

