

What kind of informal science education resources do urban south Los Angeles parents want?

Results from a Parents' Needs Assessment Survey

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January 2010

Iridescent is a science education non-profit organization. Our mission is to use science, technology and engineering to develop persistent curiosity and to show that knowledge is empowering.

We work with engineers and scientists and help them communicate their interests to children through engaging, inquiry-based courses that illustrate the real-world applications of Physics. Parents are required to accompany their children and be an integral part of the exploration and discovery. We emphasize long-term impact and focus on engaging, educating and empowering parents so that they are better able to support their children's interest.

We conducted two surveys with parents from our partner schools in Los Angeles in 2008 and 2009 to determine their needs and expectations from an informal science education program.

FALL 2008

Iridescent sampled 361 parents from eight partner schools at Back-to-School Nights (Figure 1). These schools were mainly situated in South Los Angeles and represented a mix of charter and non-charter schools that serve primarily low-income Hispanic and African-American students as seen in the figure below.

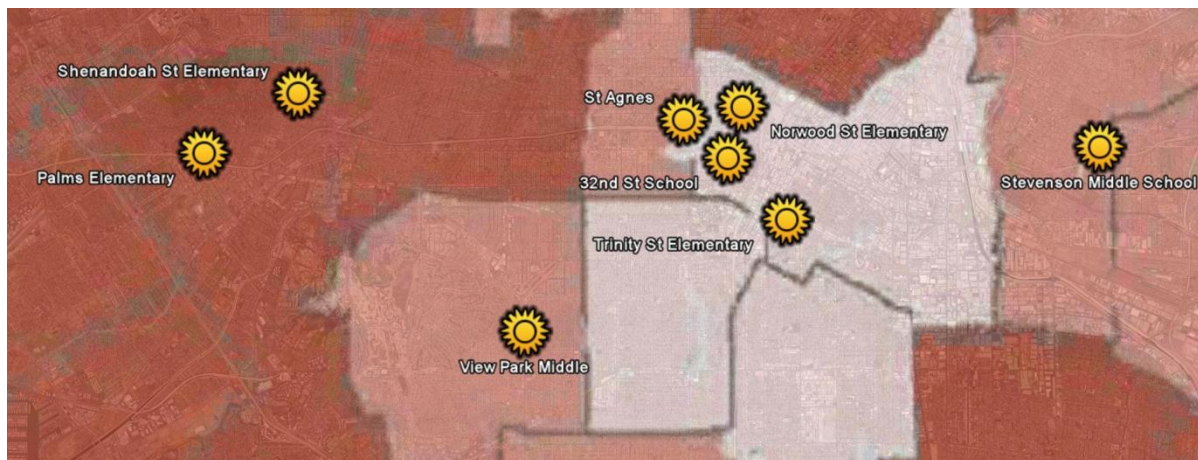
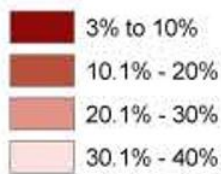


Figure 1 Iridescent's eight partner school sites that participated in the Fall 2008 Parent Needs Assessment Survey. The school sites are overlaid on a poverty map that was developed by United Way using 2006 data.

Percent Population Poor



Parents were asked about reasons they would enroll their child in Iridescent's science programs, positive outcomes they expected from the program, and things they currently do to support their child's education.

"Why would you sign your child up for this program?"

Main reasons why parents were interested in having their children attend Iridescent's science Courses were:

1. So that their children could learn new things
2. That their child wanted to attend
3. They wanted their children to make new friends

"What would you like to gain through this program?"

Main positive outcomes parents hoped to gain were:

1. Increased knowledge about science. Nearly one quarter of parents (23%) said they would like to learn about science.
2. Increased ability to "help my child(ren) with their homework" (22%).
3. Getting information about and access to USC (19%)
4. Learning about new community and school resources (18%)

"What do you do to help your child in his/her education?"

Only 22% of parents said that they made sure their child did their homework and one in five parents (19%) said that they helped their children with their homework.

RECOMMENDATIONS

Parent's low involvement in their child's homework habits could possibly be improved by getting them involved with Iridescent's programs, as parents viewed Iridescent as a great resource to learn how to better support their child's education. Thus one way to get parents involved would be to focus on the message that Iridescent could empower parents with science content knowledge and the ability to help their children with their homework.

FALL 2009

Iridescent sampled 943 parents from 14 partner schools in South Los Angeles that primarily served low-income Hispanic and African-American students (Figure 2). The goal of the survey was to inform decisions on what science programs parents would want for their children, whether Iridescent should develop an online Parent Social Networking Ning Site (to cost-effectively and scalably maintain contact with them after the Family Science Courses), what features to incorporate on that site and what resources to develop that would help parents engage their children in science after the courses. The survey also had some questions determining interest in co-investing and a Parent Leadership Program.

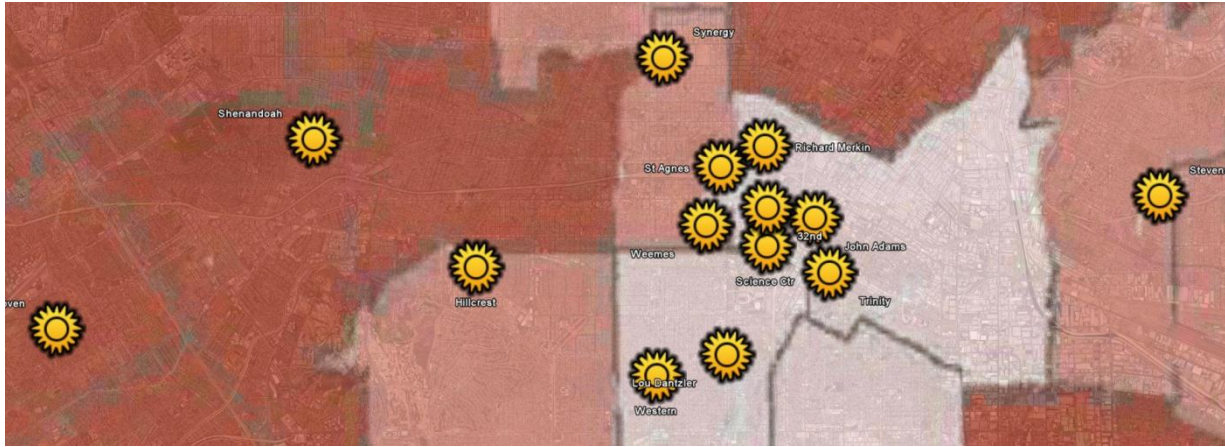


Figure 2 Iridescent’s 14 partner school sites that were surveyed during the 2009 Parent Needs Assessment Survey. The school sites are overlaid on a poverty map that was developed by United Way using 2006 census data.

OVERALL INTEREST IN FOUR PROGRAMS IRIDESCENT OFFERS/COULD OFFER

On the whole, parents were very positive toward all four of the programs that Iridescent tested. Almost three out of five parents were very interested in the Iridescent’s programs on the whole. Parents thought that Iridescent’s in-class science sessions were the most appealing, with 87% being positive toward those courses. These courses were defined as *“4 week class led by USC engineers for your children during their science class at school.”*

Almost nearly as popular were the science courses that focused on student projects. The student science project was described as a *“2 month long project for your child on a topic of her/his choice. Your child will be mentored individually by an engineer and will have access to sophisticated tools and equipment like microscopes, robots and computers.”* Although it was the third most highly rated series, the family science classes, described as *“4 week evening class led by USC engineers, in which you conduct experiments and learn science along with your children”*, still garnered 72% total positive interest and nearly half of all parents (46%) were ‘very interested’ in family science classes. Even the family science project, which was rated the lowest, had 67% total positive interest.

Parents seemed most comfortable with classes that stayed in the classroom and did not involve parents teaching science at home. This is consistent with what we have experienced in the past. Parents who haven’t participated in our Family Science Program or seen videos from the sessions are unable to overcome their biases against science and their own feelings of inadequacy regarding supporting their child’s science education. Videos are very effective in showing parents that others like them are participating in the sessions, supporting their child’s activities meaningfully and having fun!

Interest in different programs	In-class Science Courses	Student Science Project	Family Science Courses	Family Science Project
	Bases:	813	785	780
<u>Total positive interest</u>	<u>87%</u>	<u>84%</u>	<u>72%</u>	<u>67%</u>
Very interested	73%	66%	46%	43%
Somewhat interested	14%	18%	26%	24%

Neutral	6%	9%	18%	18%
<u>Total negative Interest</u>	<u>7%</u>	<u>7%</u>	<u>11%</u>	<u>16%</u>
Somewhat disinterested	3%	3%	5%	8%
Very disinterested	4%	4%	6%	8%

ONLINE PARENT SOCIAL NETWORKING SITE

Parents' Internet Usage

Almost 4 in 5 parents use the Internet at least once a week. This is encouraging as it suggests that online forms of communication may be an efficient way to contact and interact with parents directly. This finding supports trends seen in the research Iridescent conducted in Fall 2008 in which 87% of parents said they had computers at home and 82% said they had internet access.

Internet usage	Total
Base:	843
<u>Once a week or more often</u>	<u>81%</u>
Daily	50%
2-3 times/week	20%
Once a week	11%
2-3 times/month	4%
Once a month	4%
4-5 times/year	5%
Do not use the Internet	5%

Interest in features of an online forum for parents

As over 80% of parents log on to the Internet at least once a week, an online forum where parents can check in on their child's education could prove to be a value resource for parents. Iridescent asked parents how interested they would be in an online forum for parents that would give them resources to support their child's education, adding that the parents would be provided a class to teach them how to use the forum. Parents were asked to rate different features that could be included in the online forum, including, videos of engineers explaining concepts and showing how to conduct experiments; the ability to share pictures/videos from the science sessions with friends, family and other parents; learning how to send their child to university, such as USC; access to engineers; monthly science stories; and lesson plans on how to conduct science experiments with children at home.

Overall, positive interest in an online forum appears very strong. On average, three quarters of parents were positively interested in each website feature. Parents were most interested in gaining access to resources outside their local community, including access to information about institutions of higher education and access to engineers. This finding supports trends seen in the parent research Iridescent completed in fall 2008. The partnership that Iridescent has with USC is a beneficial one, as it helps attract the interest of parents who may not otherwise be interested in science programs.

Interest in different	Learn to send your child to colleges	Access to engineers	Science Lesson	Science Stories	Science Videos	Share photos &
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features of an online forum	such as USC		Plans			videos
Bases:	814	757	753	750	796	764
<u>Total positive interest</u>	<u>87%</u>	<u>78%</u>	<u>76%</u>	<u>75%</u>	<u>74%</u>	<u>71%</u>
Very interested	76%	55%	53%	51%	48%	43%
Somewhat interested	11%	23%	23%	24%	26%	28%
Neutral	7%	13%	13%	14%	15%	17%
<u>Total negative Interest</u>	<u>6%</u>	<u>8%</u>	<u>11%</u>	<u>11%</u>	<u>10%</u>	<u>11%</u>
Somewhat disinterested	2%	3%	4%	5%	4%	7%
Very disinterested	4%	5%	7%	6%	6%	6%

SCIENCE RESOURCES

Amount spent on home entertainment products

In the past six months, almost one in four parents (23%) spent \$50-\$100 on movies, including DVDs. Parents spend slightly more than average on movies rather than video games or music. As parents spend a significant amount of their home entertainment budget on movies, than other forms of entertainment, offering parents educational, science DVDs would be a great way to encourage at-home engagement with science lessons.

Amount spent in the past 6 months	Movies, including DVDs	Music	Video games
Bases	759	707	723
\$0-\$50	63%	77%	66%
<u>\$50-\$100</u>	<u>23%</u>	<u>17%</u>	<u>21%</u>
\$100 or more	14%	7%	14%
\$100-\$200	9%	4%	8%
More than \$200	5%	3%	6%

Interest in buying science-related products to excite kids about science

Surprisingly, storybooks garnered more interest than t-shirts.

Interest in possible products	Science Story books	Science Videos	Science T-shirt	Science Kits	Science Posters
Bases:	805	802	800	782	763
<u>Total positive interest</u>	<u>80%</u>	<u>77%</u>	<u>72%</u>	<u>71%</u>	<u>70%</u>

Very interested	59%	49%	50%	57%	46%
Somewhat interested	21%	28%	22%	24%	24%
Neutral	11%	13%	16%	11%	14%
<u>Total negative Interest</u>	<u>9%</u>	<u>10%</u>	<u>12%</u>	<u>9%</u>	<u>17%</u>
Somewhat disinterested	4%	5%	5%	4%	9%
Very disinterested	5%	5%	7%	5%	8%

PARENT CO-INVESTING

Amount of possible donations to Iridescent

Most parents were willing to spend a small sum of money to support the Family Science Courses. Nearly three out of four parents (73%) were willing to donate between \$5 and \$20. Fifty one percent of parents were most interested in donating \$10 or less. Only 9% were interested in donating more than \$20. Nearly one in five (18%) reported that they were not interested in donating anything.

Amount willing to donate to Iridescent for science program	Total
Base:	814
<u>\$5-\$20</u>	<u>73%</u>
\$5	26%
\$10	25%
\$20	22%
<u>\$30 or more</u>	<u>9%</u>
\$30	4%
\$40	5%
<u>Not interested in donating</u>	<u>18%</u>

Parents' interest in volunteering for Family Science Courses

Iridescent evaluated parents' commitment to the Family Science Courses by asking them to rate their interest in volunteering for the program. Iridescent described the time commitment and tasks the volunteers would need to complete*.

Half of the parents (51%) indicated that they would be interested in helping Iridescent organize Family Science Sessions at their child's school. Nearly one quarter of parents (23%) stated neutral, and the last quarter said that they were disinterested in volunteering.

The finding that 51% of parents who completed the survey were interested in volunteering is encouraging. The survey has ascertained that parents are not only willing to invest money to support Iridescent in their child's school, but they are also willing to provide support with their own time and resources. Their willingness to provide support will help ensure sustainability of the Family Science Courses at each site.

* *“We are looking for motivated parents who would help us organize the Family Science Sessions at your school. We would provide a 1-2 session leadership class led by USC Business students. Time commitment = 30 hours for one month. Responsibilities would include organizing food, materials and funds.”*

Parents' interest in volunteering for Family Science Courses		Total
	Base:	824
<u>Total positive interest</u>		<u>51%</u>
Very interested		29%
Somewhat interested		22%
Neutral		23%
<u>Total negative Interest</u>		<u>26%</u>
Somewhat disinterested		10%
Very disinterested		16%