

**G**OODMAN RESEARCH GROUP, INC.  
Program Evaluation • Consultation • Market Research

*Sid the Science Kid*  
*Season 1*  
**Outreach Evaluation**

**PREPARED BY**

Elizabeth R. Bachrach, Ph.D.  
Laura M. Houseman, B.A.  
Molly Priedeman, B.A.  
Irene F. Goodman, Ed.D.

**SUBMITTED TO**

Joyce Campbell  
KCET

January 2010

## EXECUTIVE SUMMARY

*Sid the Science Kid* (STSK) is a daily PBS series co-produced by KCET and The Jim Henson Company in Los Angeles. Modeled on the Preschool Pathway to Science (PrePS) curriculum, STSK is comprised of a daily television series, website, and outreach campaign designed to engage three- to six-year-old children and their adult caregivers. For children, the project aims to expand their natural curiosity, and develop science process skills they can use as they seek answers and actively explore their world. For adult caregivers, the project aims to increase the interest, comfort, and confidence they need to support a climate of curiosity for their children.

Through national partnerships with PBS stations and early childhood community partners, the STSK project staff conducted an outreach campaign. Goals included promoting the series, conducting community events, and providing professional development opportunities and educational materials to those who care for young children.

Goodman Research Group, Inc. (GRG), an evaluation research firm in Cambridge, MA and Los Angeles, CA that specializes in the evaluation of educational programs, materials, and services, conducted a comprehensive external summative evaluation of STSK's first season, including the series and website (fall 2008) and the training workshops portion of the national outreach campaign (spring through fall 2009) that was conducted after the series premiered. (A final report of GRG's evaluation of series and website has already been presented to KCET.) GRG's evaluation of the outreach campaign examined the effectiveness of the training workshops; this document presents findings related to the reach and efficacy of those professional development workshops, nationally.

## METHODS

GRG developed and administered surveys to training workshop attendees immediately after the session and again 2-3 months later. A total of 3,336 completed the post surveys and 292 completed the online follow up surveys. The surveys were designed to obtain a profile of workshop participants including their place of work and the children in their care, feedback about the workshop, expected and actual use of the information and materials, and perceived changes in their science-related attitudes and behaviors. Station partners also completed an online survey and phone interview; they provided feedback about the success of the outreach campaign in their communities.

## KEY FINDINGS

**Training workshops were attended by a diverse range of adult caregivers and child care providers across the country.**

The majority of attendees were women; 38% identified themselves as Hispanic, 32% as White/Caucasian, and 15% as Black/African American. More than half (61%) attended the workshop as a child care provider working in a child care center, licensed family child care home, library, school, or social service agency. The remainder attended as a primary caregiver of a preschool-aged child, of whom 82% were mothers.

**Attendees enjoyed the training workshops, learned from them, and expected to use the information and materials they received.**

All elements of the training workshops were rated positively; attendees reported increased understanding of how to incorporate science into their regular routines with young children as well as confidence to do so. They expected they would use the DVD and tip sheets with children.

**Two to three months after their training, participants reported they found the workshop materials useful and they were integrating science into their routines with the children in their care.**

Primary caregivers were watching *Sid the Science Kid* with their children and including science in their activities in and outside of the home. Child care providers incorporated science activities into their curriculum and in their free play options, and were suggesting science activities to work on with the children in their care.

**Station partners considered the outreach campaign a successful overall experience.**

Partners felt the training workshops were effectively organized and implemented and well-attended by adult caregivers of young children. They perceived attendees were engaged and satisfied with their training, and were motivated to use what they learned with the children in their care.

## **KEY RECOMMENDATIONS**

KCET built a successful national community partnership through the STSK educational outreach campaign. The KCET name brought immediate recognition and trust, which, in turn, increased the likelihood of wide interest and participation. As KCET goes forward with future similar campaigns, GRG makes the following recommendations.

*At the time this report was completed, KCET had already modified the outreach and training materials, including several recommendations made by the evaluators. Such cases are highlighted below.*

**GRG recommends that KCET continue to promote the STSK educational philosophy via training workshops nationally.** In nine months, the trainings reached over 4,000 parents and child care providers; a majority of trainings were delivered in fall and winter. With continued train-the-trainer sessions and sharing

of training materials and information, many more adult caregivers easily can be reached.

*Since the close of the data collection period in December 2009, KCET has continued to distribute outreach materials and further training workshops have continued and are ongoing.*

**GRG recommends making available on KCET's website templates of materials so partners can continue to provide them to their local partners and constituencies.** After the grant period, with at least a portion of materials available online, trainings that are of the same quality as those offered during this past year can continue across the country. Electronic versions may lend themselves to translation to other languages, by KCET outreach staff and/or by the staff at local stations as needed.

*Since the close of data collection, KCET has already created electronic templates of the materials; they are available on the KCET website and have been distributed, via DVD, to all of the station partners. Additionally, all materials have been translated into Spanish, including the episodes on DVD and the posters. The Spanish versions will be part of the educational outreach kit.*

**GRG recommends future STSK outreach promotes the value of children's educational TV on PBS as a tool that both complements and supplements inquiry-based teaching of science process skills.** Outreach promotion can be used to frame the educational philosophy as sound and well-developed and can highlight STSK as one of many tools one can use to engage children and adults in science inquiry.

**GRG recommends that in future national outreach campaigns, KCET facilitate discussion among participating station representatives.** Discussions can occur online, via webinar or listserve, by phone, or in person. Given the opportunity to share experiences and lessons learned with one another, partners can enhance the outreach in their own communities as well as strengthen cross-station relationships.

**Overall, the *Sid the Science Kid* national outreach campaign achieved its goals successfully, as a wide range of adult caregivers in several communities across the country were introduced to the series, participated in training workshops, and received professional development and educational materials that they were comfortable using with the young children in their care. Follow up results indicated that the adults continued to use and enjoy the STSK educational materials with children in a meaningful way.**

**G**OODMAN RESEARCH GROUP, INC.  
Program Evaluation • Consultation • Market Research

*Sid the Science Kid*  
*Season 1*  
**Summative Evaluation**

**PREPARED BY**

Elizabeth R. Bachrach, Ph.D.  
Laura M. Houseman  
Irene F. Goodman, Ed.D.  
Cathy Tran

**SUBMITTED TO**

KCET

February 2009

## EXECUTIVE SUMMARY

*Sid the Science Kid* (STSK) is a daily PBS series co-produced by KCET and The Jim Henson Company in Los Angeles. Modeled on the Preschool Pathway to Science (PrePS) curriculum, STSK is comprised of a daily television series, website, and outreach initiative that aim to engage three- to six-year-old children and their adult caregivers. For children, the project aims to expand their natural curiosity, developing science process skills for new ways to seek answers and actively explore their world. For adult caregivers, the project aims to increase the interest, comfort, and confidence they need to support a climate of curiosity for their children.

Goodman Research Group, Inc. (GRG), an evaluation research firm in Cambridge, MA and Los Angeles, CA that specializes in the evaluation of educational programs, materials, and services, conducted a comprehensive external summative evaluation of STSK's first season. The goal was to assess overall impact on child and adult learners with attention to ways in which the series and website may be interrelated. Primary research questions included:

- 1) To what extent does the program engage preschool-aged children and their co-viewing adult caregivers?
- 2) In what ways does viewing STSK and visiting the website affect children's knowledge and behaviors around science interests, skills, and habits of mind?
- 3) In what ways does viewing STSK and visiting the website affect adult caregivers' interest, comfort, and confidence with science content such that they may support their children's natural scientific curiosity?

## METHODS

In all, 211 families with preschool-aged children who watched PBS programming at least once a month were recruited for participation in four cities across the country: Greater Los Angeles, Seattle, Chicago, and Boston. Families interested and eligible to participate were assigned to one of three experimental conditions:

**Condition 1 (Viewing+Web):** Families watched the five Super Science Tools episodes of STSK on DVD and visited the STSK website together, in addition to their typical weekly television viewing. (N=65).

**Condition 2 (Viewing Only):** Families watched the STSK episodes in addition to their typical weekly television viewing (N=69)

**Condition 3 (Non-Viewing):** Families maintained their typical weekly television viewing and website usage for five consecutive days (N=72).

Adults completed surveys and an Activity Diary for the week. A subsample of families had a researcher visit their home to co-view the final episode, interview the child (in viewing groups), and conduct informal play activities with the child to examine differences between viewers' and non-viewers' actions. Another

subsample of adults was interviewed by phone about two months after the study week to learn of any changes since the study.

## **KEY FINDINGS**

**Most (95%) of the evaluation participants were mothers because they were the adults who typically co-view with children.**

Across the four cities, slightly more than half of participants were working, and most had their children in child care three to four half-days a week, on average.

**STSK successfully engaged both preschool children and their adult caregivers.**

All viewers enjoyed the program overall as well as its individual segments. Some segments were more appealing to children, and others were more appealing to adults. Adults identified most strongly with Teacher Susie and Sid's mother, while children identified more with Sid and his friends.

**The STSK website complemented the program and children in both viewing groups requested going to the site after viewing.**

Adults in the Viewing Only group spent more time with the games for children than with the Parents and Teachers section. The website was received positively; relative to other children's television websites, STSK was considered the same or better due to the educational content focused on science.

**During and after viewing STSK, children asked more questions related to concepts from the programs.**

Children demonstrated an understanding of the content presented and asked sophisticated questions that reflected they were able to take the concepts a step further. For example, after viewing, children's daily questions to adults had more to do with how things work (i.e., building on the content related to science tools).

**When presented with similar materials to those they had watched on STSK, compared to non-viewers, children replicated activities and used terminology they heard on the show and that reflected scientific investigation and observation.**

Children who viewed STSK correctly identified and used the science tools provided; several made verbal and written observations in notebooks. Most children, regardless of experimental group, had difficulty with the concept of estimation.

**After viewing, adults reported increased confidence with science content and increased comfort and interest in engaging in science activities with their preschool-aged children.**

Adults expanded their definitions of “science” and realized how many science activities they were already conducting with their children. They planned to play a more active role in suggesting and encouraging science-related activities in and outside the home, supporting an environment of curiosity for their children.

## KEY RECOMMENDATIONS

**GRG recommends that KCET and Henson continue with the same characters and types of segments and continue to highlight the science content while modeling investigative behaviors and science habits of mind.** STSK provides content and themes that appeal to both children and parents. This broad appeal is important if KCET hopes and expects that parents and other adults will continue to co-view with children. Children were highly aware that Sid and his friends were doing and learning science throughout the show, and they thoroughly enjoyed watching. Adults appreciated the clear focus on science and noted that this was the first show to focus on this important content area.

**The STSK formula (which includes using the same kinds of segments in each episode and basing a week’s worth of episodes on a common theme) is a useful way to engage and sustain viewers’ interest.** Children attended to the program throughout the entire half hour and were notably engaged most of the time, asking questions, singing along with songs, and predicting what was coming next.

**GRG recommends maintaining the same format throughout the entire week for this series.** Children quickly learned the format of the program and appreciated the consistency. They expressed confusion when something changed (i.e., final review episode format differed). An additional episode related to the theme, in lieu of a review episode, will be well received.

**GRG recommends adding to the website more interactive games that are clearly marked and have basic instructions.** Children are familiar with television websites; the majority visit PBSKids.org frequently. After viewing STSK, children requested going the website. Most children seek out the interactive games on the web. In order to keep STSK as a popular web destination, the children’s games should be highlighted prominently, labeled with clear instructions, and updated regularly.

**GRG recommends continued reliance on child development experts to review concepts and ensure they are age-appropriate.** It was clear – from the questions they asked and their terminology – that children understood most of the science concepts presented in the Super Science Tools episodes. Ongoing formative testing with children on these types of concepts will ensure that they are age-appropriate and that the activities are replicable.

**GRG recommends modeling and highlighting further the opportunities for informal science learning outside the home.** After viewing, adults projected they would visit science museums, zoos, and aquariums more frequently in the near future. In subsequent seasons, modeling school group

and family trips to informal learning centers in the community will provide adults with specific ideas for such family activities.

**GRG recommends that KCET and Henson continue to promote the show as a science show.** By being transparent about science, rather than hiding or presenting it indirectly, the show is encouraging interest in science in young children. In promotion of the series, producers should capitalize on the fact that it is received positively because it is a science show, not in spite of it.

Based on evaluation of the first season, we find that *Sid the Science Kid* television series, complemented by the website, is reaching stated goals and has successfully created a well-received space for itself in lineup of quality children's television programming.

Goodman Research Group, Inc.

**Main Office**

955 Massachusetts Avenue, Suite 201  
Cambridge, Massachusetts 02139

Tel: (617) 491-7033

Fax: (617) 864-2399

[info@grginc.com](mailto:info@grginc.com)

[www.grginc.com](http://www.grginc.com)

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