

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
) MB Docket No. 09-194
Empowering Parents and Protecting Children)
in an Evolving Media Landscape)

COMMENTS OF THE PUBLIC BROADCASTING SERVICE

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SUMMARY

As an organization that has used the power of media to educate and inspire children and their parents for over forty years, the Public Broadcasting Service (“PBS”) welcomes the Commission’s leadership in exploring the needs of children and their parents in the evolving media landscape. While the exposure of children to media presents risks and challenges, it also presents enormous opportunities to educate and inspire, particularly in the form of public media. The programming and services that PBS makes available to children and their parents across digital media platforms — including on television and IP-based platforms such as the PBSKIDS.org family of websites, station websites, streaming video services, and interactive educational video games — embody the benefits of media to children. These benefits include:

1. *Strengthening Literacy Skills.* As the director of the Annenberg Children’s Media Lab has explained, “Learning to read begins early on in a child’s life ... and children need multiple experiences with storytelling and language in which to do so.” Curriculum-based literacy media play a crucial role in strengthening children’s literacy skills, and PBS has deployed a comprehensive approach to providing such media in order to help children learn how to read and to enjoy reading. Our approach has delivered proven results in aiding children to develop core early literacy skills. In these comments, we discuss and attach three studies documenting how our literacy-based educational offerings effectively demonstrate the role of media in strengthening children’s literacy skills.
2. *Building Interest in Math and Science.* At PBS, we embrace the principle expressed recently by President Obama that America’s role as the world’s engine of technological innovation depends on how we educate students in science, technology, engineering, and math. PBS offers fifteen educational programs devoted to the “STEM” fields, including *Sid the Science Kid*, *Curious George*, and *Cyberchase*. Each of these programs combines engaging, on-air and online content to stimulate children’s interest in science, technology, engineering, and math. PBS has also deployed an array of educational web-only media, such as *Lifeboat to Mars*, which a recent *USA Today* article recommended to “[p]arents and teachers looking for a way to make learning biology fun for kids.”
3. *Promoting Healthy Lifestyles.* Childhood obesity is a major public health concern, with obesity rates for preschool children tripling in the past 30 years. The proliferation of advertising for unhealthy foods on commercial children’s programming across platforms plays a troubling role in this epidemic. Providing quality, noncommercial programming and services is thus more important than ever to the health of our nation’s children, as demonstrated in a recent UCLA School of Public Health study on “The Associations of

Television Content Type and Obesity in Children.” To that end, PBS KIDS helps children lead healthy lifestyles through a strong lineup of health-related, broadband and broadcast content, as well as community outreach efforts.

4. *Developing Media Literacy.* Educating children in the use of media itself can help them build critical analytic skills, become more discriminating in using mass media, distinguish between reality and fantasy, and consider whether media values are their values. Because PBS is not beholden to commercial interests, we are in a unique position to teach children how to view media critically. We do so through standalone initiatives like the *Get Your Web License* service and the *Don't Buy It: Get Media Smart* section of the PBS KIDS website, as well as through embedded media literacy lessons in familiar children's content like *Arthur* and *Mister Rogers' Neighborhood*.
5. *Reaching Children in Underserved Communities.* Media can be a vehicle for reaching children from underserved communities of varying backgrounds and cultures. PBS KIDS exemplifies this value. As a recent report by two noted experts in children's media found, “Educational television media for young children, stimulated by the pioneering ‘Sesame Street,’ have accumulated a four-decade track record indicating that under the right conditions, basic reading, math, and social skills can be enhanced for young children, especially those from underserved communities.” In addition, recent surveys have demonstrated that PBS KIDS television and online content reach a higher proportion of viewers from underserved demographics, such as Hispanic and African American households, as compared to such groups' representation in the U.S. population.

At the same time that children receive immense benefits from public media, much commercial programming exposes children to unhealthy marketing and other risks. It is therefore critical that a commercial-free, educational safe haven be available to all children across media platforms. PBS exists in part to serve as such a safe haven, and we remain firm in our conviction that media should be used to serve kids and not to sell to them.

PBS looks forward to serving both as a resource to the Commission as it investigates the matter of empowering parents and protecting children in an evolving media landscape and as a model to other content providers as they strive to better serve families through a variety of platforms. Through its multi-platform educational offerings and efforts such as participation in this proceeding and a continuing dialogue with the Commission and other policymakers, PBS remains committed to fostering a media landscape that serves the needs of our nation's children.

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As an organization that has used the power of media to educate and inspire children and their parents for over forty years, the Public Broadcasting Service (“PBS”) welcomes this opportunity to comment on the Commission’s *Notice of Inquiry* on Empowering Parents and Protecting Children in an Evolving Media Landscape (the “NOI”).¹

INTRODUCTION

PBS and its 358 member public television stations agree with and live by the principle expressed in the NOI that a “significant benefit of media for children is helping children to learn.”² Our children’s future will be determined by what they learn today, and their chances for success rest on their daily influences, many of which are provided by media.

The impact of media on children and its pervasive presence in their lives is undeniable. As research by the Kaiser Family Foundation has shown, children’s lives are saturated with media; children ages eight to eighteen devote an average of 7 hours and 38 minutes per day to

¹ Empowering Parents and Protecting Children in an Evolving Media Landscape, *Notice of Inquiry*, MB Docket No. 09-194 (Oct. 22, 2009) (hereinafter “NOI”).

² *Id.* at ¶ 18.

using entertainment media, which adds up to over 53 hours per week.³ Dr. Vic Strasburger, a professor of pediatrics who has written extensively about the effects of media on children, has explained that media is “one of the most powerful teachers of children that we know of.”⁴ As the media landscape evolves, children have access to a growing array of platforms, and their use of new digital platforms has generally been in addition to, rather than as a substitute for, significant consumption of television programming.⁵

PBS believes that this massive exposure of children to media presents a tremendous opportunity for education. As the director of the Early Education Initiative at the New America Foundation recently wrote in the *New York Times*, rather than simply trying to keep children away from televisions, computers, iPods, and the Nintendo, we ought to “think creatively about harnessing this screen time for good, helping our kids reach higher planes intellectually and emotionally.”⁶ Similarly, a recent report by two noted experts in children’s media explained that “[e]ducators should embrace — not castigate — video games and TV” because “[s]uccessful shows like ... [PBS’s] ‘The Electric Company’ demonstrate that television can teach skills in ways that encourage adults to be involved with children’s learning as an interactive experience between parent and child. The digital media and games spawned by such shows have been used informally to accelerate children’s cognitive growth, language development, and affiliation with

³ Henry J. Kaiser Family Foundation. “Daily Media Use Among Children and Teens Up Dramatically from Five Years Ago.” Jan. 20, 2010, available at <http://www.kff.org/entmedia/entmedia012010nr.cfm>.

⁴ Gold, Matea. “Kids watch more than a day of TV each week.” *Los Angeles Times*, Oct. 27, 2009, available at <http://articles.latimes.com/2009/oct/27/entertainment/et-kids-tv27>.

⁵ Gray, Rockelle. “Nielsen reports TV viewing time down slightly.” *Examiner*, Dec. 14 2008, available at <http://www.examiner.com/x-29842-Paducah-Childrens-Media-Usage-Examiner~y2009m12d14-Nielsen-reports-TV-viewing-time-down-slightly>.

⁶ Guernsey, Lisa. “Wired Kids, Negligent Parents?” *New York Times*, Jan. 28, 2010, available at <http://roomfordebate.blogs.nytimes.com/2010/01/28/wired-kids-negligent-parents>.

school learning.”⁷ New technologies such as video games allow us to reach and engage children who were previously unreachable and motivate them to learn.

PBS and public television are well qualified to speak to the benefits to children of media. Motivated by the promise of media to reach and teach children, PBS and public television pioneered the concept of educational children’s television through shows like *Sesame Street*, now in its 40th season. Along with programs such as *Mister Rogers’ Neighborhood* and *The Electric Company*, *Sesame Street* has helped shape a generation of Americans — teaching them not only about letters and numbers, but also about values such as sharing, cooperation, and respect for others.

In recent years, PBS and public television, under the banner of PBS KIDS, have built upon the success of *Sesame Street* with a slate of new programs and content that re-imagines children’s media for a new generation. For instance, PBS KIDS introduced *Curious George* in 2006, an animated series based on a pre-school level curriculum of science, technology, and engineering. Since its debut, *Curious George* has become the most-watched program among preschoolers in the United States. In millions of households, public broadcasting remains as “the [parent’s] best friend from 6:00 in the morning until 6:00 p.m.” and serves as “an electronic oasis for children and a medium where parents can feel comfortable with their children watching.”⁸

PBS has eagerly embraced and harnessed new technologies as the media landscape has developed over the four decades since the organization’s inception. PBS is pursuing its

⁷ Gee, James Paul and Michael Levine. “TV Guidance.” *Democracy Journal*, Spring 2009.

⁸ Henry J. Kaiser Family Foundation. “Anticipating Children’s Media Policy in the Obama Era.” Feb. 25, 2009, available at http://www.kaisernetwork.org/health_cast/hcast_index.cfm?display=detail&hc=3116 (statement of Colin Cromwell, then-aide to Rep. Ed Markey).

educational mission online through services targeting three distinct audiences: PBS Parents, PBS KIDS, and PBS Teachers. First, PBS Parents is dedicated to empowering parents by helping them to understand the educational value of all of the options available to their family. Second, the comprehensive digital resources of PBS KIDS give children access to engaging educational games and video content, such as a literacy skills-building program, multimedia content for interactive white boards, and educational iPhone applications. Third, PBS Teachers offers web-based professional development and training to educators, providing them with access to multimedia resources and instructional guides, as well as a searchable library of over 9,000 local and national standards-based teaching activities, on-demand videos, and interactive simulations. The educational value of these resources is reflected in the fact that PBS is the number one source of television and online content used by pre-K teachers in the classroom.⁹

PBS provides services for parents, children, and teachers that are unique among not only broadcasters but all media. According to research conducted by GfK Roper Public Affairs & Media in December 2009 and January 2010, PBS KIDS earned the distinction as the most educational media brand when compared with National Geographic Kids, Discovery Kids, Leapfrog, Disney, Nickelodeon, Scholastic, Fisher Price, YahooKids, and others.¹⁰ Survey respondents agreed that PBS leads the industry, when compared to both cable and commercial broadcasters, in helping children realize their potential and getting kids ready for success in school and in life. The effectiveness of PBS in the educational children's media arena was also recognized in a November 2008 study by Children NOW, which found that "PBS offers some of

⁹ Grunwald Study, 2009 Media and Technology Use and Trends Among K-12 & Pre-K Teachers.

¹⁰ Press Release, "New Research Confirms PBS the Most Trusted and Unbiased Source for News Ahead of Fox News Channel, CNN and Other Commercial Networks," Feb. 18, 2010, available at <http://www.pbs.org/roperpoll2010>.

the most highly educational programs on broadcast television and serves as a model of successful educational programming for commercial broadcasters.”¹¹

Based on our significant experience with children’s media, PBS directs these comments toward discussing how media, particularly public media, can benefit children in the following ways: (a) strengthening literacy skills; (b) building interest in math and science; (c) encouraging healthy lifestyles; (d) teaching media literacy and digital skills; and (e) reaching underserved communities. In addition, we explain the critical importance of providing a commercial-free educational safe haven for children across media platforms.

I. BENEFITS OF MEDIA FOR CHILDREN

A. Literacy Skills

Literacy and language skills are essential to a child’s success. To be ready for school, a child must meet key reading milestones by age five.¹² Deborah L. Linebarger, Ph.D., director of the Annenberg Children’s Media Lab, has explained that “[l]earning to read begins early on in a child’s life ... and children need multiple experiences with storytelling and language in which to do so.”¹³ Curriculum-based literacy media plays a crucial role in strengthening children’s

¹¹ Children NOW, “Educationally Insufficient – An Analysis of the Availability and Educational Quality of Children’s E/I Programming,” at pg. 9, Nov. 2008, available at http://publications.childrennow.org/publications/media/eireport_2008.htm.

¹² Sadly, many children get left behind and face the burden of illiteracy throughout their lives. A recent federal study shows that an estimated 32 million adults in the USA – about one in seven – have little or no literacy skills. Toppo, Greg. “Literacy study: 1 in 7 U.S. adults are unable to read this story.” USA Today, Jan. 8, 2009, available at http://www.usatoday.com/news/education/2009-01-08-adult-literacy_N.htm; *see also* State & County Estimates of Low Literacy, available at <http://nces.ed.gov/naal/estimates/overview.aspx>.

¹³ Press Release, “Research Proves Super WHY! Helps Children Learn to Read,” May 6, 2009, available at http://www.pbs.org/aboutpbs/news/20090506_pbskidsuperwhy.html.

literacy skills, and PBS has deployed the most comprehensive approach to providing such media in order to help children learn how to read and to enjoy reading, with nine programs devoted to literacy education. Our approach has delivered proven results in aiding children to develop core early literacy skills as demonstrated by the three studies that we have attached and discussed below regarding selected educational offerings.

Super WHY!. *Super WHY!* is a 3-D animated adventure series designed to provide children ages three to six with the critical skills they need to read. The show is based on the adventures of four fairytale friends who live in Storybrook Village: Whyatt Beanstalk, the younger brother of Jack from *Jack and the Beanstalk*; Red, from *Little Red Riding Hood*; Pig, from the *Three Little Pigs*; and Princess, from *The Princess and the Pea*. In each episode, the characters transform into their superhero alter egos, the Super Readers, and literally fly inside books using the power of literacy to solve problems. Throughout the program, the characters engage a fifth superhero, Super You, who is actually the child viewer.

Two studies have demonstrated the effectiveness of the show and its associated multimedia and multiplatform content. The first study, conducted by the Children’s Media Lab of the Annenberg School for Communication and attached to these comments as Appendix A, assessed the ability of *Super WHY!* programming to help boost preschoolers’ early literacy skills in areas such as letter names and sounds, rhyming, and matching spoken words to print; it also looked at whether children could apply this learning in their daily lives.¹⁴

¹⁴ Summative Evaluation of Super WHY!: Outcomes, Dose, and Appeal by: Deborah Linebarger, Katie McMenamin, and Deborah Wainwright. Prepared by: Children’s Media Lab, Annenberg School for Communication, University of Pennsylvania. This study was funded in part by the Corporation for Public Broadcasting through a cooperative agreement with the U.S. Department of Education’s Ready To Learn Grant.

Children in the study were randomly assigned to an experimental group or a control group. Children in the experimental group viewed 20 episodes of *Super WHY!* twice, while children in the control group viewed 20 episodes of a science program with no focus on literacy twice. The results concluded that viewing *Super WHY!* can play a major role in the acquisition of early literacy abilities that lead to the development of reading success. Specifically:

- ***Improved overall performance*** – The most prominent finding in this project was that preschool children who watched *Super WHY!* across an 8-week period performed significantly better on nearly all program-specific measures and most of the standardized measures of early reading achievement when compared with those preschool children who watched an alternate program that had no focus on literacy.
- ***Growth on targeted literacy skills*** – Over time, children who watched *Super WHY!* showed significant gains on alphabet knowledge, phonological and phonemic awareness, symbolic and linguistic awareness, and comprehension. For example, *Super WHY!* viewers' pre-test to post-test gain on tasks that measured phonological and phonemic awareness averaged 29 percent compared with an average gain of 13 percent for children in the control group.
- ***Improved pre-reading skills*** – Watching *Super WHY!* dramatically improved preschoolers' letter and sound-naming speeds, skills that are directly linked to conventional reading achievement. Children participating in the *Super WHY!* group were 24 percent faster at naming letters and 44 percent faster at naming sounds when compared to children in the control group.
- ***Highest gains for children from low-income and working class families*** – Children from low-income and working class families showed the most dramatic improvement on tests measuring phonological, phonemic, and symbolic awareness. Among *Super WHY!* viewers, children from low-income and working class families scored 46 percent higher on standardized tests than those in the control group, whereas children from middle class families scored 11 percent higher than those in the control group. Eighty-one percent of low-income and working class *Super WHY!* viewers, compared with 62 percent of those in the control group, were able to identify at least 16 upper-case and 9 lower-case letter names.
- ***High levels of engagement*** – Nearly all of the children (97 percent) who rated the show and its characters gave *Super WHY!* high marks, so young viewers are not only learning, but they are also being entertained and engaged.

A second study, conducted by the Florida State University's Center for Reading Research and attached as Appendix B to these comments, further underscores the role of programming like

Super WHY! in improving early reading aptitude. The study evaluated 33 *Super WHY!* Reading Camps that were held in the summer of 2008, serving 454 preschoolers in 19 cities across 17 states.¹⁵ The week-long camps, built on a carefully developed curriculum designed especially for children from low-income families, were led by local teachers at schools, day care, and Head Start centers, in partnership with local PBS member stations that participate in the PBS KIDS Raising Readers initiative. Each day campers participated in activities as a different *Super WHY!* character and practiced the reading skills of that specific character.

Throughout the summer camp, the preschool participants took tests to assess learning gains from the experience. The Florida Center for Reading Research analyzed the resulting data to identify the benefits of watching the show and participating in the daily activities. Among other findings, the study found that campers showed gains in all of the literacy skills presented in the program and developed proficiency in reading letters, sounds, and words. Moreover, preschoolers showed an 84 percent gain in phonics skills and a 139 percent gain (*i.e.*, more than double their pre-camp levels) in word recognition skills.

PBS KIDS Island. PBS KIDS Island is an online resource for building and improving the reading skills of pre-school children ages two through five. At the PBS KIDS Island website, children can build an “online island amusement park” by playing reading games featuring PBS KIDS characters, including those from *Sesame Street*, *Between the Lions*, *Super WHY!*, *Martha Speaks*, and *WordWorld*. Aggregating these games on one website offers access to the programs’ characters and creates a familiar and comfortable environment for emerging readers. Children using PBS KIDS Island are guided through eight literacy-building levels, from

¹⁵ Super WHY! Summer Camp Assessment Findings, Dr. Beth M. Phillips, Florida Center for Reading Research at Florida State University, Dec. 15, 2008.

phonological awareness to letter sequencing and vocabulary. A progress tracker assists parents as they cultivate their child’s learning and enables teachers to chart progress for an entire classroom with detailed reports on each child’s needs and progress. Also included on the website are educational videos, printable lessons plans, and “Word of the Day” activities to build vocabulary.¹⁶

While PBS KIDS Island can benefit students in all socio-economic categories, it was designed specifically to meet the needs of students from low-income families and their parents, as well as teachers and other caregivers who support these families. Working in partnership with the Corporation for Public Broadcasting and the American Institute for Research, PBS conducted in-depth research about the daily lives, needs, and media access of students in schools and school districts that receive Title I funding from the Department of Education; typically at least forty percent of students in such schools or school districts are from low-income families.¹⁷

This research showed that many parents in Title I communities have low literacy and English-language skills. As a result, the materials for parents that were developed for PBS KIDS Island implement best practices for low-literacy audiences. For example, parents can learn about PBS KIDS Island through a video and audio tour that highlights the main features of the site,

¹⁶ Public policy institutes and industry experts have noted the success of PBS KIDS Island and other PBS KIDS Raising Readers efforts. In offering suggestions for “keeping students’ minds active during Winter Break,” Lisa Guernsey, director of the Early Education Initiative at the New America Foundation, noted that PBS KIDS Island is a “a carnival of different literacy-based games for children, with options for parents to be engaged in and aware of what kids are achieving as they move up to different levels in the games.” Fabel, Leah. “How to beat the winter break blahs.” *Washington Examiner*, Dec. 28, 2009, available at <http://www.washingtonexaminer.com/local/How-to-beat-the-winter-break-blahs-8677979-80084112.html>.

¹⁷ For more information, *see* U.S. Department of Education, *Improving Basic Programs Operated by Local Educational Authorities (Title I, Part A)*, available at <http://www.ed.gov/programs/titleiparta/index.html>.

showcases the learning objectives, and provides a clear walk-through of the site. Moreover, resources for parents and teachers on PBS KIDS Island are fully translated into Spanish, as is all navigation throughout the site. These translations allow parents to understand what skills are being taught to their children in each game, even if the parents cannot understand the English in the games themselves.

PBS KIDS Raising Readers. Both *Super WHY!* and PBS KIDS Island were created as part of the PBS KIDS Raising Readers literacy campaign, which itself was launched pursuant to a Ready To Learn grant in collaboration with the U.S. Department of Education, the Corporation for Public Broadcasting, and the Ready To Learn Partnership in 2005. The campaign aims in particular to promote literacy among children ages two through eight in low-income communities, using a unique 360-degree approach to learning by surrounding families, caregivers, teachers, and parents with programming and other multi-media resources at home, in school, and throughout the community. The initiative harnesses the power of the media to enhance early literacy skills using content from PBS KIDS shows as a springboard for quality learning, such as *Between the Lions*, *Sesame Street*, *Super Why!*, *Martha Speaks*, and *WordWorld*.

A study published in October 2009 by the Education Development Center, Inc. and SRI International, and attached as Appendix C to these comments, demonstrates the benefits of PBS KIDS Raising Readers video content and educational games for preschool students.¹⁸ The study found that children who participated in a mediated, media-rich literacy curriculum were better

¹⁸ Summative Evaluation of the Ready to Learn Initiative; “Preschool Teachers Can Use a Media-Rich Curriculum to Prepare Low-Income Children for School Success: Results of a Randomized Controlled Trial” by: William Penuel, Shelley Pasnik, et al. Prepared by: Education Development Center, Inc. and SRI International; Sept. 2009. This study was funded in part by the Corporation for Public Broadcasting through a cooperative agreement with the U.S. Department of Education’s Ready To Learn Grant.

prepared for kindergarten than students who did not use the curriculum. The curriculum combined teacher training with six different activities integrating media from PBS KIDS Raising Readers series. The research evaluated content and interactive games from *Super WHY!*, *Between the Lions*, and *Sesame Street* in 80 preschool classrooms with 398 children from low-income families. Children who participated in the literacy curriculum outscored children in the comparison curriculum on all five measures of early literacy used in the study, including naming letters, knowing the sound of letters, knowing concepts of story and print, and recognizing letters in a child's own name. Ultimately, the study showed that PBS KIDS Raising Readers is playing a critical role in closing the literacy achievement gap and improving kindergarten readiness, through the use of research-based multimedia teaching resources.

B. Math and Science

As President Obama explained in a January 2010 press conference on the “Educate to Innovate” campaign, “our future depends on reaffirming America’s role as the world’s engine of scientific discovery and technological innovation,” and our ability to do so “depends on how we educate our students today, especially in math, science, technology, and engineering.”¹⁹ Not only does the PBS approach embody this philosophy, but we have already taken concrete steps towards implementation, with proven results. For instance, our fifteen programs devoted to the fields of math, science, technology, and engineering include the following:

- *Sid the Science Kid* uses music and humor to promote exploration, discovery, and science readiness among preschoolers. The main character, Sid, begins each episode with a new question – such as “Why are my shoes shrinking?” or “Why do bananas get mushy?” –

¹⁹ Remarks by the President on the “Educate to Innovate” Campaign and Science Teaching and Mentoring Awards, Jan. 6, 2010, available at <http://www.whitehouse.gov/the-press-office/remarks-president-educate-innovate-campaign-and-science-teaching-and-mentoring-awar>.

and then embarks on an effort to find answers with the help of family and friends. Based around national science learning standards, cognitive learning theory, and a comprehensive preschool science curriculum, *Sid the Science Kid* increases learners' opportunities for discovering important ideas by connecting experiences conceptually and exploring topics in-depth over an extended period of time.

- *Curious George* teaches early engineering concepts and problem-solving for preschoolers ages three to five, using the world's most curious monkey to inspire children to explore science, engineering, and math in the world around them. Based on the books by Margaret and H.A. Rey, each episode features two animated stories followed by short live-action segments in which kids investigate the ideas that George introduces in the stories. *Curious George* also aims to show parents and caregivers how to foster the development of science and math skills in children.
- *Cyberchase* builds each episode around a different math concept that the hero characters must utilize to defeat the villain. After each animated segment, there is a live-action segment in which two children show the viewers how math can help solve real-world problems. The target audience is children ages eight to twelve. The goals of *Cyberchase* are to foster enthusiasm for math, model math reasoning, help children improve their problem-solving skills, demonstrate the usefulness of math, and inspire all children to approach math with confidence.
- *Dinosaur Train* embraces and celebrates the fascination that preschoolers have with both dinosaurs and trains while encouraging basic scientific thinking and skills as the audience learns about natural science, natural history, and paleontology. *Dinosaur Train* is seen through the eyes of Buddy, a preschool-aged Tyrannosaurus Rex. Buddy and his adoptive family of Pteranodons go for adventures on the Dinosaur Train to meet all kinds of dinosaurs in different eras and learn fascinating new facts about these incredible creatures.

Each of these on-air programs is accompanied by an array of noncommercial online tools that enhance the learning experience for children. In addition to these efforts to engage children on issues involving math, science, technology, and engineering, PBS has deployed an array of educational web-only media, such as *Lifeboat to Mars*, a biology game aimed at elementary-age students. In the game, children learn biology concepts by using tools to build a virtual ecosystem

in outer space and creating their own games through modding.²⁰ A recent *USA Today* article recommended that “[p]arents and teachers looking for a way to make learning biology fun for kids can find it in an outstanding free online game called *Lifeboat to Mars*.”²¹

Surveys of parents with young children have demonstrated the effectiveness of PBS over-the-air and online content for greatly stimulating interest in math, science, technology, and engineering. In responses to surveys, parents confirmed that children watching programs such as *Sid the Science Kid* exhibited a greater interest in science, such as wanting to look up facts on the Internet, and a better understanding of the natural world. Moreover, after watching *Dinosaur Train* for just one week, 67 percent of children were interested in learning more about dinosaurs, in comparison to just 18 percent prior to watching the program, and 54 percent of children expressed interest in the world of nature generally, up from 22 percent prior to watching *Dinosaur Train*.²²

C. Healthy Lifestyles

Childhood obesity is a major public health concern, with obesity rates for preschool children tripling in the past 30 years and quadrupling for children ages six to eleven.²³ Related health risks such as juvenile diabetes, heart disease, depression, and high blood pressure are also

²⁰ “Modding” refers here to the opportunities given to children to be in the driver’s seat and create their own unique versions of the games. Children can name their modified games and upload these creations for others to experience.

²¹ Gudmundsen, Jinny. “PBS Kids’ teaches biology in an online game.” *USA Today*, Feb. 4, 2010, available at http://www.usatoday.com/tech/columnist/jinnygudmundsen/2010-02-04-lifeboat-mars_N.htm.

²² Summative Research for “Dinosaur Train: Focus Group and Viewing Diary Report,” Prepared for: The Jim Henson Company by Beth E. Rabin, Ph.D., September 2009.

²³ Zimmerman, Frederick J. and Janice F. Bell, “Associations of Television Content Type and Obesity in Children,” *American Journal of Public Health*, Dec. 17, 2009 (“UCLA Study”), available at <http://www.ph.ucla.edu/pdfs/Zimmerman.pdf>.

increasing and contributing to the burden of chronic diseases. This epidemic has, as the NOI observes, “focused attention on the possible role of media use and food advertising in influencing children’s body weight and eating behaviors.”²⁴

A recent study by the UCLA School of Public Health serves to underscore a key component in the battle against childhood obesity: the availability of quality, non-commercial children’s programming as an alternative to commercial programming that advertises unhealthy food to children. The study, “Associations of Television Content Type and Obesity in Children” (“UCLA Study”), found that contrary to popular opinion, television viewing does not lead to obesity through reduced physical activity, but rather through television advertisements for foods of low nutritional quality. According to the results of the study:

only viewing of commercial content — programs in which children are exposed to in-program advertisements — was associated with obesity ... By contrast, viewing of noncommercial television (educational television presented without in-program commercials or videos or DVDs) had no statistically significant association with subsequent or concurrent obesity ... [E]vidence strongly suggests that steering children away from commercial television may have a meaningful effect in reducing childhood obesity ... Television viewing may be a sedentary activity, but it is not for that reason that it is associated with obesity in children. The relationship between television viewing and obesity among children is limited to commercial television viewing.²⁵

The relationship of commercial children’s programming to childhood obesity is not surprising, considering the amount of food advertising to which children are subjected — up to 95 percent of which may be unhealthy.²⁶ As the UCLA Study points out, food marketers “spend \$10 billion

²⁴ NOI at ¶ 30.

²⁵ UCLA Study at 336-38.

²⁶ *Id.* at 337 (citing Harrison K. and Marske A.L. “Nutritional content of foods advertised during the television programs children watch most.” *American Journal of Public Health*, 2005, 95(9): 1568-74).

a year on their efforts to influence children's diets."²⁷ Indeed, a child under five years of age sees on average more than 4,000 television commercials for food in a single year, and during "Saturday morning cartoons, children see an average of 1 food ad every 5 minutes."²⁸

Given the proliferation of advertising for unhealthy foods on commercial children's programming, a commercial-free safe haven such as PBS KIDS is more important than ever. PBS KIDS also helps children lead healthy lifestyles through a strong lineup of health-related, over-the-air and online content, as well as community outreach efforts. With 59 percent of our daily series having dedicated episodes on health and fitness, all of the characters serve as role models for children leading healthy lifestyles. Content such as *Sesame Street*'s "Healthy Habits for Life"²⁹ and *Arthur*'s "Hooray for Health,"³⁰ as well as web-only content like the recently launched "Fizzy's Lunch Lab"³¹ and educational games like *Fetch!*'s "Germinator,"³² provide important lessons about good nutrition, health and hygiene, balanced diets, and physical activity. Moreover, science-based programs, such as the *Sid the Science Kid* episodes entitled "I Want

²⁷ *Id.* at 336 (citing Institute of Medicine. "Food Marketing to Children and Youth: Threat or Opportunity?" McGinnis J.M., Gottman J.A., and Kraak V.I., eds. Washington, DC: National Academies Press, 2006).

²⁸ *Id.* at 337 (citing Gantz W., Schwartz N., Angelini J.R., and Rideout V. "Food for Thought: Television Food Advertising to Children in the United States. Menlo Park, CA: Kaiser Family Foundation, 2007; Cotugna N., "TV ads on Saturday morning children's programming – what's new?" J. Nutr. Educ. 1988; 20(3): 125-127).

²⁹ For more information on *Sesame Street*'s "Healthy Habits for Life" see <http://www.sesameworkshop.org/initiatives/health/healthyhabits>.

³⁰ For more information on *Arthur*'s "Hooray for Health" see <http://www.pbs.org/parents/arthur/lesson/health>.

³¹ For more information on Fizzy's Lunch Lab see <http://pbskids.org/lunchlab>. Fizzy's Lunch Lab is designed to bring kids and parents together to help plan meals, make snacks, and team up to make healthier eating choices for the entire family by investigating the difference between good and bad food and explaining what happens once the food you eat goes into your body.

³² For more information on *Fetch!*'s "Germinator" see <http://pbskids.org/fetch/games/germinator>.

Cake” and “Journey of a Germ,” explore how food choices and hygiene affect the body. Our characters serve as role models for children by overcoming a variety of personal health-related struggles, such as overeating in reaction to stress.

The positive role of public media in promoting healthy lifestyles for children extends beyond just eating habits. For example, PBS responded to the national H1N1 influenza crisis by deploying our library in support of reinforcing key preventative health messages about hand washing and covering one’s mouth while sneezing. *Sid the Science Kid* also addressed the issue of H1N1 by airing a special episode in October 2009 entitled “Getting a shot: You Can Do It,” which made vaccinations a fun learning experience by teaching children the basic science behind germs, viruses, and vaccines, using age-appropriate vocabulary and scientific concepts. As Lisa Henson, CEO of the Jim Henson Company, explained, “we know that getting a shot can be scary for many children,” and this “special episode is an opportunity for us to help kids understand why they are getting a shot while providing parents and caregivers with helpful resources to handle this important issue.”³³ The characters in *Sid the Science Kid* serve as great role models for children in order to help them navigate their way through challenging experiences like getting a vaccination.

D. Media Literacy

Media literacy is essential to a child’s success in a world now defined by technological innovation and an evolving media landscape. Educating children in the use of media itself can help them build critical analytic skills, become more discriminating in using mass media, distinguish between reality and fantasy, and consider whether media values are their values. As

³³ Press Release, “*Sid The Science Kid* Explores Germs, Viruses And Vaccines Just In Time For Flu Season In A Special Episode ‘Getting A Shot: You Can Do It!’” Oct. 9, 2009, available at http://www.henson.com/press_releases/2009-10-12.pdf.

the National Association for Media Literacy in Education has explained, “Today’s information and entertainment technologies communicate to us through a powerful combination of words, images, and sounds. As such, we need to develop a wider set of literacy skills helping us to both comprehend the messages we receive and effectively utilize these tools to design and distribute our own messages.”³⁴

PBS KIDS endeavors to help children develop their media literacy skills through an approach combining targeted, standalone projects and embedded media literacy lessons in content with familiar children’s characters. Because PBS is not beholden to commercial interests, we are in a unique position to teach children how to critically view media. We believe that children should learn about media literacy as early as possible, which is why PBS KIDS developed its *Get Your Web License* website to serve as a first stop for children as they begin to take advantage of the incredible educational opportunities available on the Internet. The *Get Your Web License* site walks children through basic lessons on Internet safety, etiquette, privacy, downloading, and passwords.³⁵ Since children are thrust into the role of consumers at a remarkably young age, the PBS KIDS website also includes a section entitled “*Don’t Buy It: Get Media Smart*” in order to encourage children to think critically about advertising and become educated consumers. This media literacy website is designed to provide kids with the skills and knowledge needed to question, analyze, interpret, and evaluate media messages. Some of the topics covered by *Don’t Buy It: Get Media Smart* include the “tricks” commonly used in advertising, the added cost of “cool” clothing, learning to question commercials, and

³⁴ National Association for Media Literacy Education, “Definitions.” 2008, available at <http://www.namle.net/media-literacy/definitions>.

³⁵ For more information on *Get Your Web License*, see <http://pbskids.org/license>.

distinguishing between television and real life.³⁶ Aware that children learn especially well through trusted characters, PBS KIDS has complemented these standalone projects with embedded media literacy lessons in familiar children’s content. For instance, the *Mister Rogers’ Neighborhood* website includes a section on “making sense of the news,”³⁷ and the *Arthur* website includes a section called “welcome to the web.”³⁸ The combined approach of standalone initiatives and embedded lessons in familiar content teaches children how to understand and interact with the media that surrounds them and vies for their attention on a daily basis.

E. Underserved Communities

Media can also be a vehicle for reaching children from underserved communities of varying backgrounds and cultures. PBS KIDS has seized this opportunity. The children’s content on PBS KIDS serves a diverse audience with programs that teach about cultural differences while providing opportunities to learn and grow as individuals. As a recent report by two noted experts in children’s media found, “Educational television media for young children, stimulated by the pioneering ‘Sesame Street,’ have accumulated a four-decade track record indicating that under the right conditions, basic reading, math, and social skills can be enhanced for young children, especially those from underserved communities.”³⁹

According to a survey conducted by GfK Roper Public Affairs & Media in December 2009, PBS KIDS television programming attracts a far higher proportion of viewers from

³⁶ For more information on *Don’t Buy It: Get Media Smart*, see <http://pbskids.org/dontbuyit>.

³⁷ For more information on *Mister Rogers’ Neighborhood*, see <http://pbskids.org/rogers>.

³⁸ For more information on *Arthur*, see <http://pbskids.org/arthur>.

³⁹ Gee, James Paul and Michael Levine. “TV Guidance.” *Democracy Journal*, Spring 2009.

Hispanic, African American, and low-income homes compared to their representation in the U.S. population; and PBS KIDS online content also attracts a significantly higher proportion of web users of Asian, Hispanic, and African American descent compared to their representation in the average U.S. web audience.⁴⁰ PBS KIDS reaches these underserved communities through Miss Rosa, who hosts the PBS KIDS preschool block and incorporates Spanish language into the daily curriculum. In addition, we target underserved communities with programs such as the bilingual series *Maya & Miguel*, which presents culture and language learning as fun, relevant, and rewarding for all children, with a special emphasis on the Latino population, and *Between The Lions*, which weaves Spanish language content into segments of the show. In fact, the PBS KIDS GO! online video player provides over 70 videos in Spanish, including content from *Cyberchase*, *Maya & Miguel*, *Sesame Street*, *WordGirl*, and *Postcards from Buster*.⁴¹

II. IMPORTANCE OF A COMMERCIAL-FREE EDUCATIONAL SAFE HAVEN

Children are a special audience with fewer analytic skills and greater vulnerability than the rest of the population with respect to television and online advertising. It is therefore critical that a commercial-free, educational safe haven be available to all children across media platforms.

PBS exists in part to serve as such a safe haven. It offers a destination — both on the television and on the Internet — that is free from the marketing of commercial products to children. PBS makes every effort to avoid even the remote possibility of exploiting children

⁴⁰ Press Release, “Opening worlds of possibility... Closing the achievement gap,” Feb. 18, 2010, available at http://www.pbs.org/roperpol12010/PBSKIDS_Brochure_2.18.10.pdf (citing NTI, PBS weekly cume for 08-09 broadcast season; Quantcast, December 2009).

⁴¹ For more information on the PBS KIDS GO! online video player see <http://pbskids.org/go/video>.

through the content broadcast by its member stations and on its website. For instance, our “Editorial Standards & Policies” prevent underwriters from encouraging children to use or consume their products by disallowing product descriptions in sponsorship messages and underwriter logos on product packages. Furthermore, the underwriting credit must be limited to either a message of support for PBS and public television or a message promoting education and learning.⁴²

A study published by Children NOW in 2008 demonstrates the unique role of PBS and public television in providing quality, educational content for children, particularly as commercial television generally fails to meet even basic standards for educational and informational programming. Children NOW explains:

In return for the free use of publicly-owned television airwaves, broadcast stations are required to air three hours per week of children’s educational/informational (E/I) programming. The guidelines that determine what qualifies as an ‘educational’ program do not address the quality of the educational content. Thus, broadcasters have a great deal of discretion in applying the E/I label to a wide range of programs designed for a young audience.⁴³

To determine how commercial broadcasters exercise that discretion in categorizing a program as “educational and informational,” the Children NOW study evaluated the educational quality of the 30 most widely-aired children’s programs designated as E/I on commercial television and compared those results to an evaluation of 10 children’s programs aired on PBS. The study concluded that the E/I system is not working because “[o]nly one in eight E/I episodes earned a

⁴² Public Broadcasting Service Editorial Standards and Policies, available at http://www.pbs.org/aboutpbs/aboutpbs_standards.html.

⁴³ Children NOW, “Educationally/Insufficient? An Analysis of the Availability & Educational Quality of Children’s E/I Programming,” Nov. 2008, available at http://www.childrennow.org/uploads/documents/eireport_2008.pdf.

rating of highly educational . . . [and] nearly twice as many were found to have only minimal educational value.”⁴⁴ In contrast, the study found that “PBS offers some of the most highly educational programs on broadcast television and serves as a model of successful educational programming for commercial broadcasters . . . Public broadcast episodes scored, on average, more than a full point higher on the quality assessment (9.1) than did those airing on commercial channels (7.9).” Children NOW also found that a variety of PBS programs “earned an exemplary rating for their educational content,” including *Sesame Street*, *Between the Lions*, *Cyberchase*, and *Fetch! with Ruff Ruffman*.⁴⁵

In addition to our commercial-free educational content on television and online, a third platform through which PBS has begun to deliver such content to children is educational video games. According to a recent study published by the Joan Ganz Cooney Center at Sesame Workshop, entitled “Game Changer,” contrary to “their reputation as promoters of violence,” digital games can actually help children gain significant knowledge including content (such as vocabulary, science, and history), skills (such as literacy, math, and problem-solving), and health (especially physical fitness). “Digital games offer a promising and untapped opportunity to leverage children’s enthusiasm and to help transform learning in America.”⁴⁶

PBS is pursuing this avenue of educating America’s children through both online web-based games and mobile games for platforms such as the iPhone. These digital games successfully extend the teaching and learning experience to new platforms by merging children’s favorite familiar characters, such as Curious George, Mister Rogers, and Martha (the talking dog

⁴⁴ *Id.* at 5.

⁴⁵ *Id.* at 9.

⁴⁶ Thai, Ann My, David Lowenstein, et al. “Game Changer: Investing in digital play to advance children’s learning and health.” The Joan Ganz Cooney Center at Sesame Workshop, June 2009.

on *Martha Speaks*), with engaging educational content. “Digital games show significant potential to promote children’s growth and healthy development. They can foster skills and knowledge that help children with academic learning, as well as habits that contribute to better health,” according to the study, and PBS is seizing the opportunity of that potential for the betterment of all children.⁴⁷

As the Commission considers how it can support uses of new digital platforms to benefit children, PBS recommends that the Commission consider the need for coordinated research as to which approaches to educational games are most effective. The “Game Changer” study identified this need as well, explaining:

Research on digital media needs to be coordinated and collaborative throughout the country. We need to enable a research network across federal executive agencies to identify gaps and determine how practices from one content domain could be transferred to others ... Federal research agencies should: Fund fellowships and model training programs to create a critical mass of scientists who specialize in games ... Prepare a new meta-analysis of existing research on the positive impacts of games and other digital media on children’s health and learning, leading to recommendations for further research ... [and] Establish a national ‘best practices’ initiative to disseminate effective uses of game technologies for education and healthy development.⁴⁸

We agree with the study’s assessment of the need for further research into the gaming platform. Paramount to PBS’s work to ensure that we are meeting the needs of today’s children is third-party independent research across all of our products and services in order to ensure that children are learning, test scores are improving, and more children are pursuing careers in science and engineering. The study “conclude[s] that current approaches to solving key educational and

⁴⁷ *Id.* at 7.

⁴⁸ *Id.* at 8.

child-health challenges insufficiently leverage the ubiquitous digital media that currently pervades children's lives ... [We] believe that the demonstrated potential of digital media, wisely guided by caring adults, could become a 'game changer' in advancing children's prospects in the decade ahead."⁴⁹ PBS is actively pursuing this game-changing approach to delivering commercial-free educational content to children via the innovative and engaging platform of video games.

⁴⁹ *Id.* at 5.

CONCLUSION

PBS looks forward to serving both as a resource to the Commission as it investigates the matter of empowering parents and protecting children in an evolving media landscape, and as a model to other content providers as they strive to better serve families through a variety of platforms. To that end, these comments have laid out the myriad ways in which PBS is designing its media to maximize the benefits to children in all subject areas, ranging from literacy, math, and science, to healthy lifestyles and media literacy. Through its multi-platform educational offerings and efforts such as participation in this proceeding and a continuing dialogue with the Commission and other policymakers, PBS remains committed to fostering a media landscape that serves the needs of our nation's children.

Respectfully submitted,

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