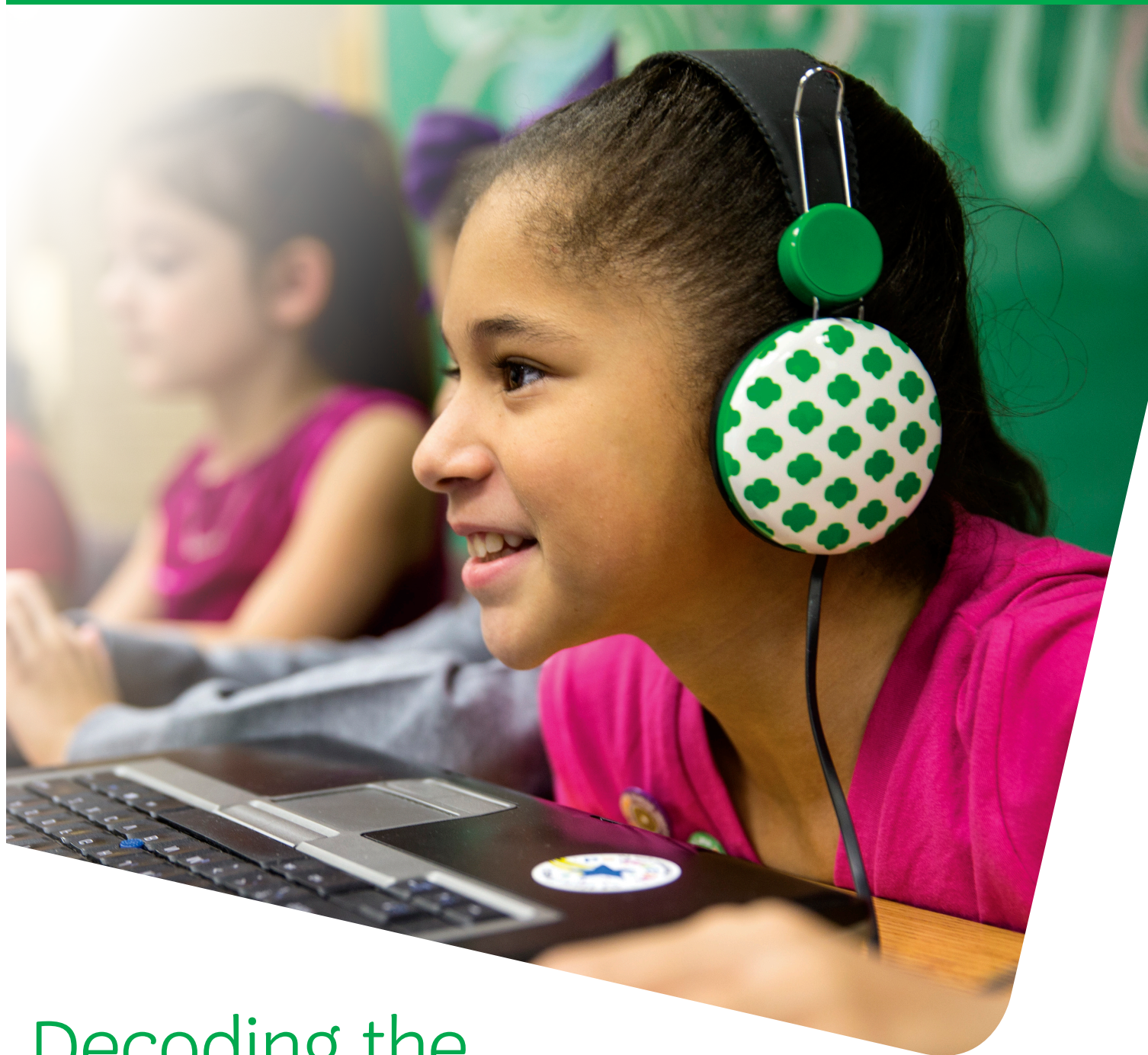




A 2019 Report by the Girl Scout Research Institute



Decoding the **Digital Girl**

Defining and Supporting Girls'
Digital Leadership



Introduction

There's no question that girls today are growing up digital, with more access to the internet and online activities than ever before. And although there's a good deal of information available about the devices kids in middle school and older are using and the websites they're visiting, less is known with regard to younger kids and to girls exclusively—and still less about how girls or boys of any age are using their digital experiences specifically to improve their lives, their communities, and the world.

To better understand the digital experiences of girls and their use of technology to lead in their own lives and beyond, the Girl Scout Research Institute conducted a national research study with nearly 2,900 girls and boys ages 5–17, as well as their parents.¹ What we learned shows that many girls exhibit leadership in the digital space—an impressive number of them to a degree that, by the high standards of Girl Scouts of the USA, qualifies them as digital leaders.

Girls' Digital Use

Our research shows that girls are using a variety of tech devices, including smartphones, iPads/tablets, desktop computers, laptops, and gaming devices. The device girls use most frequently is a smartphone, which they acquire at age 10 on average and spend about four hours a day using, with teen girls spending more than five hours daily on their phones. More than three-quarters of girls (77%) live in homes with some degree of “smart” technology, such as smart TVs, temperature controls, and appliances like smart refrigerators, vacuum cleaners, and garage doors.

Girls engage in a wide range of activities online, including watching videos and movies (84%), listening to music (77%), playing games for fun (72%), looking up and researching topics (62%), doing homework and using school apps (61%), and taking and editing photos (61%).



2,894
Number of
survey participants



Girls in lower-income households are less likely than their peers in higher-income households to engage in educational activities online,² including

doing homework and using school apps (56% vs. 63%), looking up and researching topics (58% vs. 65%), and reading books and articles (34% vs. 43%). Lower-income girls are also less likely to have and use laptops, tablets, and desktops than girls in higher-income households, although smartphone use is consistent across income ranges. All of this suggests that girls from lower-income households are missing out on valuable digital learning experiences, particularly before they start using smartphones.

Interestingly, girls are more likely than boys to engage in educational activities online, including playing games for learning purposes (55% vs. 41% of boys) and reading books and articles (40% vs. 28%). Boys, on the other hand, are more likely to play games for fun (81% vs. 72% of girls) and to game after school for four or more hours (31% vs. 17%).

1 GSRI partnered with FROM, The Digital Transformation Agency, and Touchstone Research, to conduct qualitative and quantitative research with 2,894 participants across the U.S. including 944 girls ages 5–17, 503 boys ages 5–17, and 1,447 of their parents. These national samples were aligned to U.S. Census data for youth 5–17, with respect to race/ethnicity, urbanicity, geographical region, and household income.

2 Girls in lower-income households (“lower-income girls”) are defined as girls living in households with an annual income of \$49,999 or lower. “Higher-income girls” are from households with an annual income of \$50,000 or more.

Defining Girls' Digital Leadership

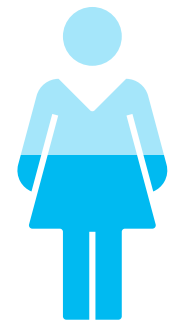
For many, leadership in the digital space is synonymous with technological expertise. But a richer definition of digital leadership is far-reaching, incorporating not only what a person knows, but what they do with their knowledge. Indeed, being a true digital leader requires more than knowledge, confidence, and capability; by Girl Scout standards, **girls who are digital leaders seek to improve their own lives and the world through their digital experiences and use of technology.** They embrace new opportunities, love to learn new things, and look critically at the information they consume online. They help others build expertise and confidence through the use of technology, they get involved with social issues they care about, and they inspire others to support the causes that are important to them. They discover new things about themselves through their digital experiences as they begin to create and innovate in the world around them.

Our research shows that many girls are actively stepping into the role of digital leader. More than half of girls today (52%) are digital leaders,³ exhibiting key leadership skills and qualities. Girls are particularly strong in trying and learning new technology, and more than three in four are confident in their tech skills. There is room for girls to grow when it comes to creating in the digital space and connecting friends and family to causes they care about.

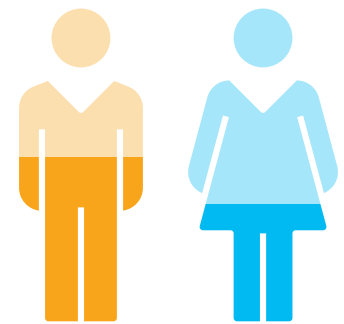
Gender Differences in Digital Leadership

Boys and girls don't differ significantly when it comes to digital leadership overall: 52 percent of girls and 50 percent of boys are digital leaders. However, gender differences exist with regard to specific forms of digital leadership:

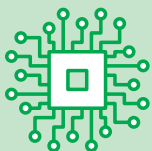
- Girls use technology more to create (e.g., making videos and doing coding projects through apps and online programs; 45% vs. 38% of boys).
- Girls have discovered a new talent or interest through technology (68% vs. 59% of boys).
- Girls are more connected to social issues and causes through technology (60% vs. 51% of boys).
- Boys are more confident in their tech skills (84% vs. 77% of girls).



52%
of girls are
digital leaders



53% **38%**
Boys are more likely than girls to believe they are the digital/tech experts in their families



Girl Scouts are more likely to be digital leaders than boys and non-Girl Scout girls.⁴

Sixty-four percent of Girl Scouts are digital leaders, versus 43 percent of non-Girl Scout girls. Girl Scouts particularly stand out when it comes to connecting to social issues and causes online (72% vs. 51% of non-Girl Scout girls), connecting others to social causes through technology (63% vs. 37%), using tech to create something new (55% vs. 41%), and being able to find reliable information online (59% vs. 40%). They are also more likely than non-Girl Scout girls to be interested in specific tech skills, such as app development, web design, robotics, programming, coding, cybersecurity, and engineering.

³ Defined as girls ages 11-17 who responded affirmatively to eight of the ten digital leadership survey items used in the research (see chart on page 4).

⁴ Current Girl Scouts represent 35 percent of the sample of girls (N=323). Girl Scout and non-Girl Scout girl samples were matched demographically, with respect to age range, race/ethnicity, urbanicity, geography, and family household income.

Digital leadership survey item	Girls	Boys
I love to learn or try new technology.	85%	88%
I have helped other people (friends, family) use their phone or computer.	77%	79%
I am confident in my tech skills.	77%	84%
When I have a question, I can usually look it up and find the answer online.	76%	81%
I can find reliable information online for school assignments.	59%	60%
I learn more about news/current events and issues in the world [online]. <i>11- to 17-year-olds only</i>	83%	84%
I have discovered a new talent or interest [by exploring online]. <i>11- to 17-year-olds only</i>	68%	59%
I am more connected to social issues and causes [because of the internet]. <i>11- to 17-year-olds only</i>	60%	51%
I have gotten my friends and/or family connected to social issues and causes [through the internet]. <i>11- to 17-year-olds only</i>	49%	44%
I have created something new through an app or [online] program. <i>11- to 17-year-olds only</i>	45%	38%
Takeaway: 52% of girls and 50% of boys are digital leaders.		

Note: Percentages indicate youth who responded “totally agree” or “kind of agree” to the survey items; bold numbers indicate statistical significance.

Supporting Girls’ Digital Leadership

To develop more female digital leaders, it’s important to understand the needs of youth—and girls in particular. Our research identifies three key factors that contribute to girls’ success as digital leaders: parent/caregiver attitudes and behavior, self-regulation, and home environment.

1. Parents and caregivers who have a positive outlook on technology are more likely to have daughters who are digital leaders. Eighty-six percent of girls who are digital leaders have parents who talk with them about the positive aspects of technology (vs. 74% of other girls), such as its potential to help girls gain valuable skills, connect with others in fun and meaningful ways, and learn about the world around them.

Parents who are aware of their daughters’ tech use and ask questions about their online activity are more likely to have daughters who are digital leaders, compared to parents who aren’t aware and don’t ask these questions. Fifty-three percent of girls who are digital leaders share details about their online activity with their parents/caregivers (vs. 36% of other girls).



Lower-income girls are less likely to be digital leaders than their higher-income peers. Forty-five percent of lower-income girls are digital leaders, compared to 54 percent of higher-income girls. In relation to their online activity, lower-income girls score lower particularly with regard to being able to find reliable information (50% vs. 64%), connecting with community (54% vs. 63%), and creating (37% vs. 49%).

2. Girls who can regulate their own screen time are more likely to be digital leaders. Girls who are digital leaders are more likely to be able to take a break from their phones when they need to (86% vs. 79% of other girls).

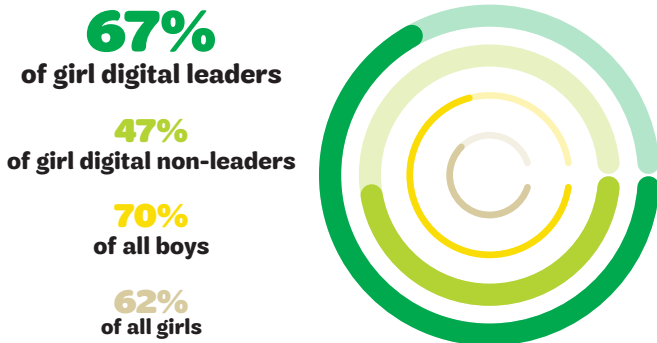
3. Girls growing up in a tech-supported environment are more likely to be digital leaders. Sixty percent of girls who are digital leaders have access to multiple smart devices at home (vs. 46% of other girls).

Access to technology beyond smartphones (e.g., iPads/tablets, laptops, desktops) allows for increased educational experiences digitally. Girls with limited tech access at home are two times more likely to be missing out on educational activities online compared to girls who have greater exposure.

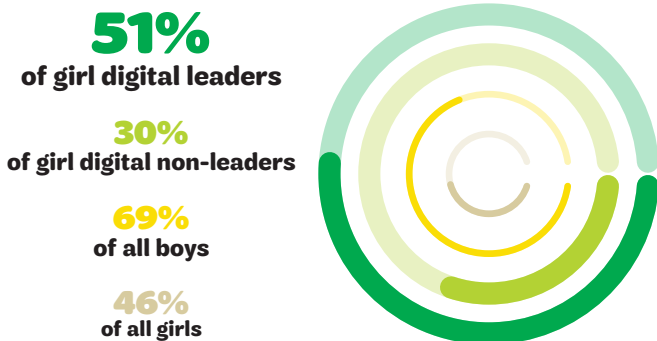
Connecting Girls' Digital Leadership to Their Aspirations

Girls who are digital leaders show enhanced interest in science, technology, engineering, and math (STEM) overall and in tech specifically (see chart below). This interest can potentially narrow the gender gap in STEM career interest.

STEM Interest



Tech Career Interest



Note: Population = 11- to 17-year-olds



Parents treat their daughters and sons differently when it comes to tech use.

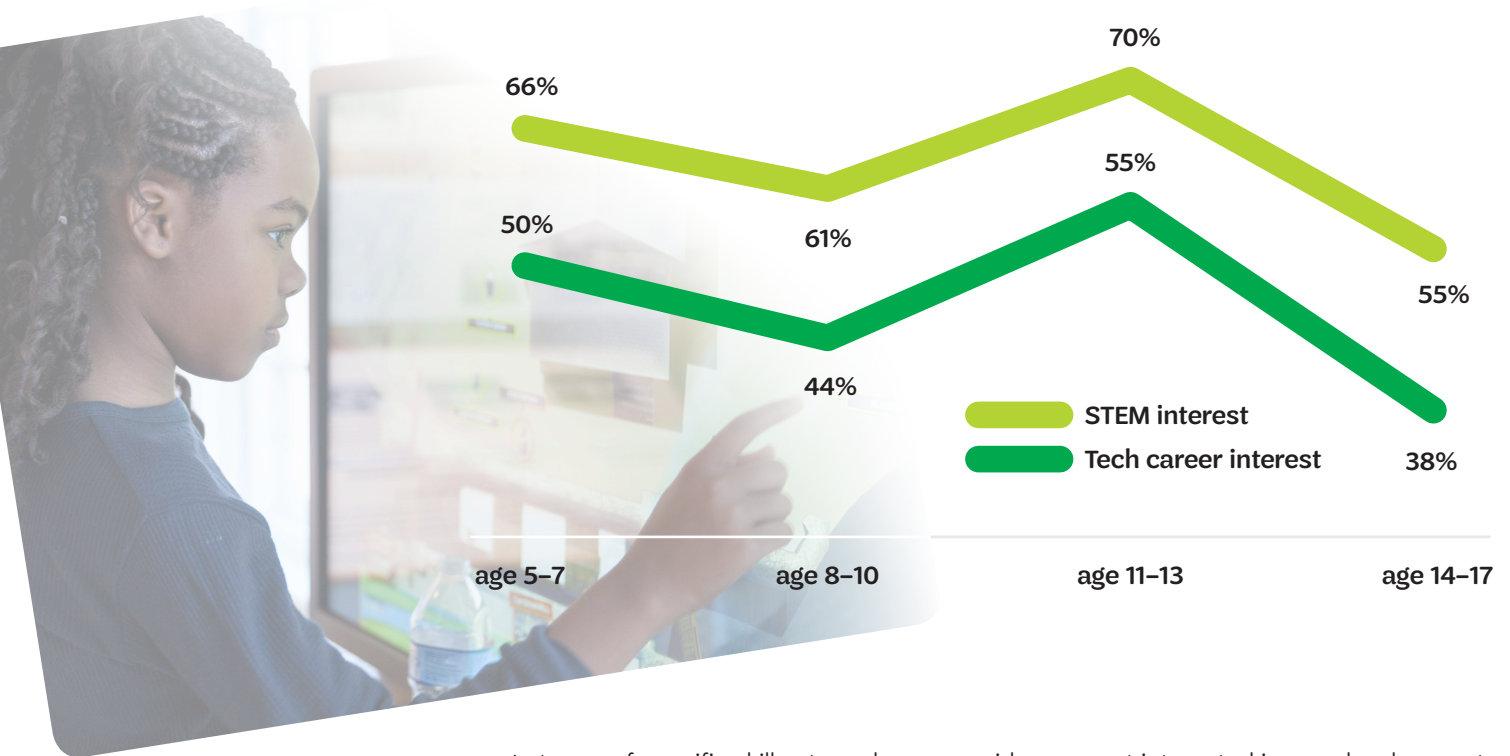
Parents have stricter rules for their daughters' social media activity and general tech use and have more concerns about their daughters' safety online compared to that of their sons.

- Parents are more likely to report that their sons figure out new tech on their own (72% vs. 67% for daughters) and that their daughters learn tech from someone else (from a parent: 56% vs. 46% for sons; from a sibling/friend: 37% vs. 31% for sons).
- Parents of girls are more likely to require that they get permission to download apps (60% vs. 51% for sons), share their passwords with a parent (50% vs. 43% for sons), turn on their privacy settings for social media (23% vs. 14% for sons), and "friend" the parent on social media (21% vs. 14% for sons).



All girls—those who are digital leaders and those who aren't—show the most interest in STEM fields and tech careers in middle school (see chart below). This suggests that early in high school is an important intervention point as we seek to maintain girls' interest in STEM, including tech.

Girls' STEM and Tech Career Interest



In terms of specific skill sets and careers, girls are most interested in app development (46%), robotics (39%), web design (34%), coding (31%), and programming (31%). However, about a third of girls are unfamiliar with prominent tech skills/fields such as engineering (30% unfamiliar), coding (30%), cybersecurity (32%), artificial intelligence (33%), and networking (37%).



While most girls' interest in STEM decreases with age, Girl Scouts' interest in these fields actually increases from age eight, when 67 percent are interested in STEM fields, through high school, when 74 percent are interested. And while Girl Scouts do see a slight drop in tech career interest from middle school to high school (from 61% to 59%), the drop is not as significant as it is for non-Girl Scout girls (from 52% to 31%), suggesting that Girl Scout involvement promotes interest, perhaps through STEM exposure and skill development, during these years.

Summary and Recommendations

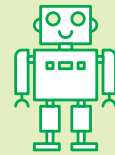
Girls' potential as digital leaders is vast. In the digital space, girls are our world's current and future innovators, designers, advocates, and community connectors. So many are effectively navigating, learning, and creating online with enthusiasm and a love of technology, using tech to teach others and improve their communities and the world. Additionally, girls who are digital leaders are more likely than those who aren't to be considering STEM careers as part of their future, which is crucial, because in a few years the current generation of girls will enter a workforce that is greatly in need of diverse STEM talent.

It is imperative that girls are not only technologically prepared to take a seat at the table, but that they possess the courage and the confidence to excel once there. Looking ahead, those who support girls' success, the betterment of our communities, and the economic health of our country would do well to keep the following research findings in mind:

- **Girls who are digital leaders have confidence in their tech knowledge**, which can grow over time with increased technology experience and a supportive network of adults, including teachers, who encourage girls in this domain. Such support goes a long way in reminding girls that they have what it takes to lead in spaces that too often are encouraged more or differently for boys.
- **While the majority of girls are currently, or on their way to becoming, digital leaders, there's room for them to grow with regard to creating and innovating in the digital space.** Supportive adults can encourage girls from an early age to take healthy risks and learn from setbacks, both of which are important generally in life and helpful particularly for girls who are interested in fields such as tech that demand constant trial-and-error learning.
- **Many girls use technology to connect to social issues and causes they care about, but fewer take steps to actively engage others.** Teaching girls that they can make a difference at an early age can encourage their exploration and development in this area, both online and off. Social media networks, when engaged with safely, can provide girls with great opportunities to connect with others and promote causes that are important to them efficiently and with a far reach.
- **Girls stand to gain from better understanding how to find reliable information online.** Knowing how to evaluate and consume information online critically by questioning information and considering various sources is a skill girls can hone with the help of parents and teachers, who can initiate, formally and informally, conversations about media and digital literacy.

To support girls at home specifically, it's important to note that:

- **Parents/caregivers with a positive outlook on technology are more likely than parents who view tech less favorably to have daughters who are digital leaders**, as are parents who understand what their children are doing online, talk with their children about their digital activity, and help their girls learn how to engage safely in the digital space.



Girls in lower-income households

and girls in rural areas tend to be less familiar with various tech skills,

including robotics (25% unfamiliar), web design (32%), programming (34%), engineering (35%), coding (36%), and artificial intelligence (38%). They are also less likely to be interested in STEM fields (58% vs. 65% of higher-income girls) or a tech career in the future (41% vs. 49% of higher-income girls).





■ **Parents of daughters tend to treat them differently than they do their sons.**

Gender-based attitudes about current and/or future tech skills and abilities and digital leadership potential can compromise girls' growth and exploration in the digital space. That boys are more confident than girls in their tech skills and see themselves as their families' digital experts suggests that adults may still be turning to boys over girls for tech expertise (e.g., device help, internet assistance). **But it's important that adults see and treat girls and boys as equally capable in the tech world.** Parents should make sure their rules for tech use are the same for daughters and sons, as well as make efforts to model digital leadership in their own lives.

To support girls at school, it's important to note that:

■ **Girls' interest in STEM fields and tech careers declines at the start of high school, suggesting that this is an important intervention point.**

The transition from middle to high school may be an especially key time to offer all girls, including digital leaders, opportunities to explore potential STEM careers. Teachers and guidance counselors should look to cultivate and heighten girls' STEM, including tech, interests around this age or before.

■ To increase their tech confidence and proficiency, **girls may benefit from greater integration of tech education across subjects** in school and through after-school tech-learning opportunities.

With the right access, adult support, and awareness of opportunities in the digital space, all girls can become digital leaders. The research behind *Decoding the Digital Girl* reveals consistent and troubling digital/tech disparities between girls from lower-income households and those from higher-income households. Perhaps because they tend to have less digital access and awareness of opportunities, lower-income girls are less likely to exhibit many elements of digital leadership. And all girls need access to technology that fuels their educational achievement and workplace readiness—so we as a society must commit to giving all girls the support they need in the digital space.

Girls who are digital leaders are already out there changing the world. Out-of-school-time activities—Girl Scouting in particular—that cater to girls' specific learning and leadership styles may reflect the most promising practices for developing ever more girls who are not just comfortable engaging digitally today, but who are primed to lead us into the digital future. ■



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