common
sense®

THE COMMON SENSE CENSUS:
MEDIA USE BY KIDS AGE ZERO TO EIGHT

TABLE OF CONTENTS

A LETTER FROM OUR FOUNDER

The Common Sense Census launched in 2011 with our first-ever look at the media habits of kids from birth to 8 years old. The goal of the census has been to act as a benchmark, and track media use over time to understand the incredible and far-reaching presence that devices and media have in the lives of our youngest population. This report is our fourth Zero to Eight study, and it comes amidst the most unprecedented of times.

This year, all of our data was collected before the start of the coronavirus pandemic—before the lockdowns, the office closures, and the remote schooling that led to stress, uncertainty, and a general loosening of screen time rules in households across the country. All of a sudden, parents who needed to balance full-time work and child care turned to screens and devices to make it all work, or to stay connected to grandparents and other family members who were no longer allowed to visit or provide support. When we began this year's census we had no idea what the coming months would hold, or how drastically life as we know it would change. But we consider our timing fortuitous: We now have a clear snapshot of our youngest children's media use before screen time began to take on a different role and meaning in our lives. This snapshot will prove to be incredibly valuable in future research as we explore the real impact of the coronavirus—and all of the challenges that 2020 has brought to bear—on both the use and the purpose of media in our children's lives.

This year's findings give us a glimpse into what we might find on the other side of the pandemic: a world in which the majority of our kids' screen time takes place not watching traditional television, but instead online, and in which access to technology continues to exacerbate the inequalities we know exist among families of different races, ethnicities, and income levels.

- For the first time since we began the census, **online video viewing dominates kids' screen time**. Our youngest kids are spending 39 minutes a day watching online videos on platforms like YouTube and TikTok, up from only 19 minutes in 2017. The growth in mobile device access is driving this increase, as nearly half of 2- to 4-year-olds and more than two-thirds of 5- to 8-year-olds have their own tablet or smartphone.

- The growth in use of mobile media devices among lower-income, Black, and Hispanic/Latinx families is also impacting **the gap in screen time by race, ethnicity, and income, which has grown substantially since 2017**. Children in lower-income households are spending nearly two hours more with screens than children from higher-income households. The difference is also pronounced among Black and Hispanic/Latinx families compared to White families.

- **Efforts to close the digital divide in home computer and high-speed internet access have stalled.** More than a quarter of lower-income families still lack internet access, and more than a third (37%) of lower-income children do not have a computer in the home. While we know work has been done over the course of the pandemic to close this gap, our lack of progress in recent years has made the climb to digital equity far steeper than it should have been.

- Differences abound by race, ethnicity, and income around the **perception of media as educational**. Black and Hispanic/Latinx, as well as lower-income parents, are more likely to say the media their kids are viewing has an educational benefit.

The explosion of online video viewing matters when we consider YouTube's role as the largest free platform for online video in the world. In our sister report, *Young Kids and YouTube: How Ads, Toys, and Games Dominate Viewing*, we undertook an analysis of videos watched by kids in this age group, and we saw firsthand what kids are seeing in many online videos: an abundance of advertising and other content that we found disturbing, but not much that qualified as truly educational.

At Common Sense, we have always been committed to fighting for technology that supports learning, health, and opportunity, and solves for inequities by creating an equitable future for kids and families. The results of this report highlight the pivotal moment in which we as a nation find ourselves around the role media and technology play in our young children's lives. As we slowly emerge from the coronavirus pandemic, we must work to close the digital divide and increase the opportunities all families have to engage with media safely, responsibly, and effectively. We hope this research is fuel to the fire for that conversation among our partners in government and industry, as it will take all of our collective efforts to ensure our children reap the benefits of media and technology equally.

**James P. Steyer,
founder and CEO**

THIS REPORT PRESENTS THE findings from the fourth wave of Common Sense Media's ongoing series of surveys about the media lives of young children in the United States. The series began nearly a decade ago, in 2011; over this period, more than 5,700 respondents have been surveyed.

As far as we are aware, this is the only nationally representative, probability-based study tracking the use of media by children from birth through age 8 in the United States. We do this study because of our conviction that media and technology are absolutely central to children's lives. Academically, the world in which today's children are growing up requires a high degree of immersion in and use of media and technology. Entertainment, social life, and play are all increasingly digital. The activities children engage in, and the content and messages to which they are exposed, are based to a large extent on the media-related choices they and their parents make. We can no longer treat media as an afterthought when it comes to child development, education, and well-being. Differences in access and use may reflect differences in opportunities and risks that researchers, policymakers, educators, parents, and health care providers need to be well equipped to address.

The final interviews for the survey took place on March 13, 2020—less than a week before much of the country was under "stay-at-home" orders due to the coronavirus pandemic. Clearly, once the pandemic reached the United States, our relationship with media changed. Children could no longer go to school, visit friends, or sometimes even go outdoors. Parents and children were suddenly at home together all day—learning, working, and playing—for months on end. How the pandemic is changing patterns of media use is a topic Common Sense will address in the next wave of this survey.

For now, this report paints a portrait of what families' media lives looked like on the precipice of change. As such, this report offers a unique opportunity to understand the evolution of media's role in young people's lives over the past decade.

- The findings cover the full spectrum of media, from print to audio to video, including reading, listening to music, watching television or online videos, and gaming.

- New items include findings on audiobooks, podcasts, virtual reality, smart speakers, and smartwatches.

- The data covers a wide range of measures, including:

  - The *frequency* of children's use of various types of media and the amount of *time* they spend in various media activities.

  - The *context* of their media use (including the home media environment, co-use with parents, and the use of media during meals and before bed).

  - The types of media *content* used (such as genres of online videos children watch, use of educational programming across devices, and how media content is selected).

  - Parents' *attitudes* about various concerns that have been raised about children and media.

  - Parents' *experiences* with the impact of media on their child (for learning, creativity, and social and emotional development).

In addition, the report explores differences in media usage by age, gender, parent education, household income, and race/ethnicity. The use of a probability-based methodology means that we have a sample of parents that is truly representative. Parents from across the country were surveyed, including those who are wealthy and not, the highly educated and those who never finished high school, those from two-parent and single-parent families, and those representing a diversity of racial and ethnic groups.

As we think about how the coronavirus pandemic may be changing family media habits and our direction in the future, it is important to know where we started—as well as the implications for educators, policymakers, parents, and child advocates.

1. On average, children from birth to age 8 use about two and a half hours (2:24) of screen media a day.

Daily use ranges from 49 minutes among those younger than 2, to two and a half hours (2:30) among 2- to 4-year-olds, and more than three hours (3:05) among 5- to 8-year-olds.

Screen time also varies a lot from child to child: In any given day, nearly a quarter (23%) of 0- to 8-year-olds don't use any screen media, while a similar proportion (24%) spend more than four hours with screens. Watching television and videos continues to be the main reason children use screen devices, accounting for nearly three-quarters (73%) of all screen time. Reading, homework, and video-chatting occupy a tiny portion (5%) of overall screen use. The amount of screen media children use has remained largely consistent since this series of surveys began in 2011, when total screen use was two hours and 16 minutes per day. On average, boys use 35 minutes more screen media than girls do per day (2:40 vs. 2:05), including 17 minutes more watching television and videos, and 17 minutes more playing video games.
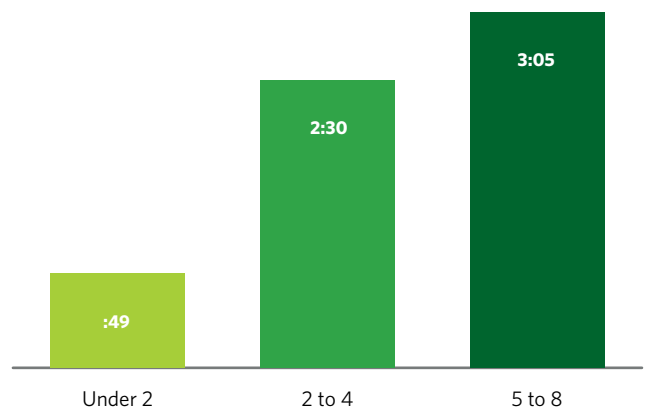
FIGURE A. Screen Use, by Activity, 2020
Among 0- to 8-year-olds, proportion of average daily screen time devoted to …

- TV/video viewing
- Gaming
- Reading (electronic)
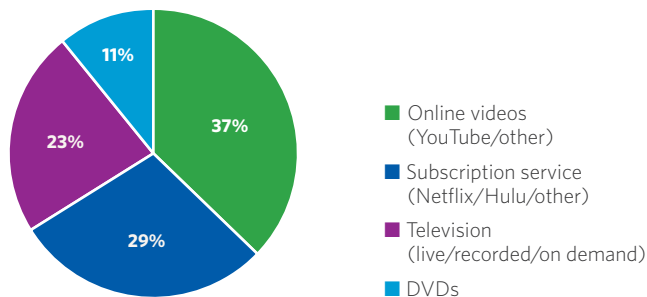- Homework
- Video-chatting
- Other/unknown
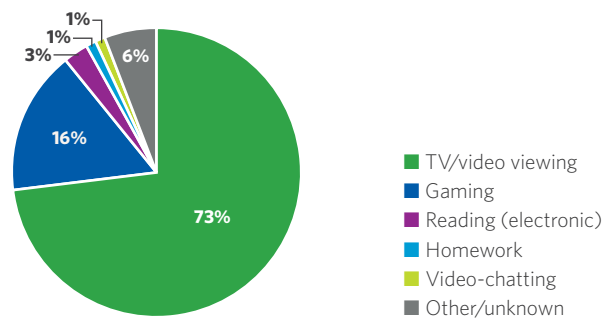
FIGURE B. Average Daily Screen Use, by Age, 2020
Among 0- to 8-year-olds, average daily amount of screen media used (hours:minutes)

FIGURE C. Television and Video Viewing, by Type, 2020

Among 0- to 8-year-olds, proportion of total TV/video viewing that occurred through …

- Online videos (YouTube/other) — 37%
- Subscription service (Netflix/Hulu/other) — 29%
- Television (live/recorded/on demand) — 23%
- DVDs — 11%

FIGURE D. Home Internet Access, by Income, 2011 to 2020

0- to 8-year-olds with access to the internet at home

Higher income: 92% (2011), 86% (2013), 96% (2017), 94% (2020)

Lower income: 42% (2011), 46% (2013), 74% (2017), 74% (2020)

FIGURE E. Home Computer Access, by Income, 2011 to 2020

0- to 8-year-olds with a laptop or desktop computer at home

Higher income: 91% (2011), 90% (2013), 97% (2017), 95% (2020)

Lower income: 48% (2011), 53% (2013), 72% (2017), 63% (2020)

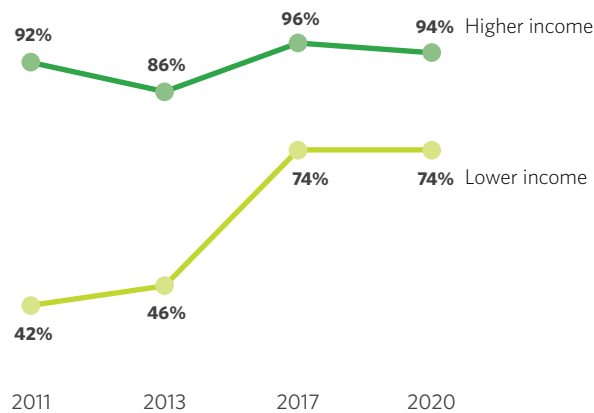Note: *Lower income* is less than $30,000 a year; *higher income* is more than $75,000 a year.

2. Online videos now dominate children's screen time.

For the first time, watching online videos on sites like YouTube now constitutes the largest proportion of children's total TV and video viewing, with an average of 39 minutes a day—more than double the amount of time devoted to online videos three years ago (:19). Next is 30 minutes a day spent watching content through a streaming service, while just 18 minutes is devoted to watching TV shows at the time they air, and another six minutes to watching shows that were recorded earlier or watched on demand.

More than a third (34%) of children age 8 and younger watch online videos every day, up from 24% three years ago. Nearly half (46%) of 2- to 4-year-olds and more than two-thirds (67%) of 5- to 8-year-olds have their own mobile device (tablet or smartphone), making online viewing even more accessible.

3. Efforts to close the digital divide in home computer and internet access have stalled.

Access to the internet in the home has been stuck at the same level since 2017, with more than a quarter (26%) of lower-income families lacking it. And more than a third (37%) of children from lower-income households do not have a computer in the home. At a time when remote learning has become essential, this failure to stem the divide could be devastating.

4. The gap in screen use by income, race, and ethnicity has grown substantially.

Children in lower-income households spend an average of nearly two hours a day more with screen media than those in higher-income homes (3:48 vs. 1:52). In 2011, the difference in screen time between children in lower- and higher-income homes was an average of 40 minutes a day; in 2017 it jumped to 1:39 a day; and in 2020 there is a 1:56 difference in daily screen use between the two groups. Similarly, Hispanic/Latinx and Black children spend more time with screen media (3:03 and 4:09, respectively) per day than White children do (1:52), and the difference between groups has been growing. (In previous waves of the survey, the largest difference between White and Black children was 1:12 a day; today the difference is 2:17 a day). There are similar differences with screen use by parent education. One of the key drivers behind this growing differential in screen use is the growth in mobile media use among children in lower-income, Black, and Hispanic/Latinx families.

5. Black parents are much more likely than White parents to perceive educational benefits to their children from screen media.

Parents in lower-income homes are also more likely to see positive effects of screen media than parents in higher-income homes. Thirty-nine percent of Black parents vs. 19% of White parents say the media their child uses help their learning "a lot," as do 38% of lower-income vs. 17% of higher-income parents. Indeed, half of Black parents say that learning is a "very important" reason their child uses screen media, compared to 31% of White parents.

FIGURE F. Screen Media Use, by Demographic, 2011 to 2020

Among 0- to 8-year-olds, average screen use per day

INCOME
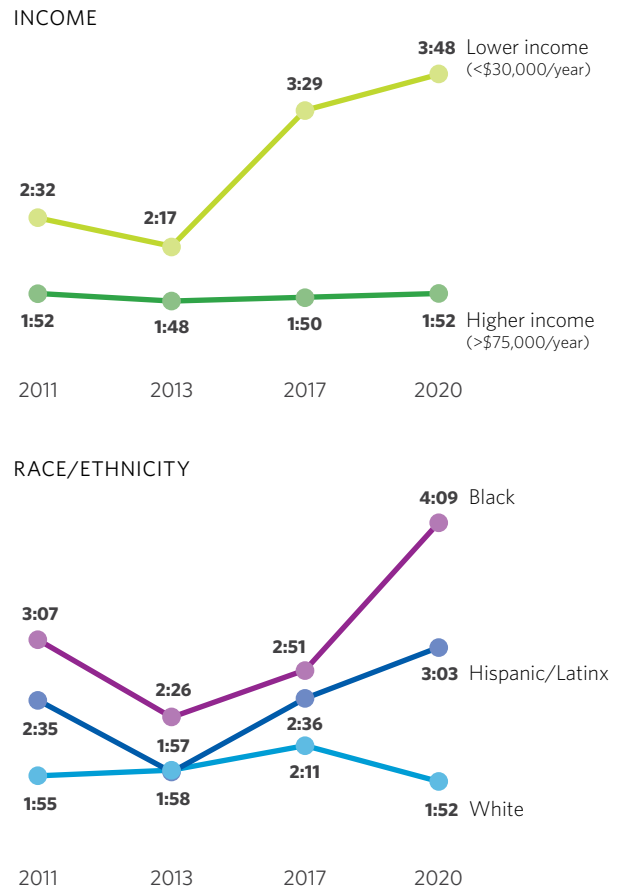
RACE/ETHNICITY

FIGURE G. Parents' Views About Media and Learning, by Race/Ethnicity, 2020

Among parents of 0- to 8-year-olds, percent who say …

Learning is a very important reason for their child's use of screen media
- Black: 50%
- Hispanic/Latinx: 37%
- White: 31%

Media their child uses helps learning a lot
- Black: 39%
- Hispanic/Latinx: 32%
- White: 19%

Strongly agree they are satisfied with amount and quality of child's educational media
- Black: 33%
- Hispanic/Latinx: 27%
- White: 15%
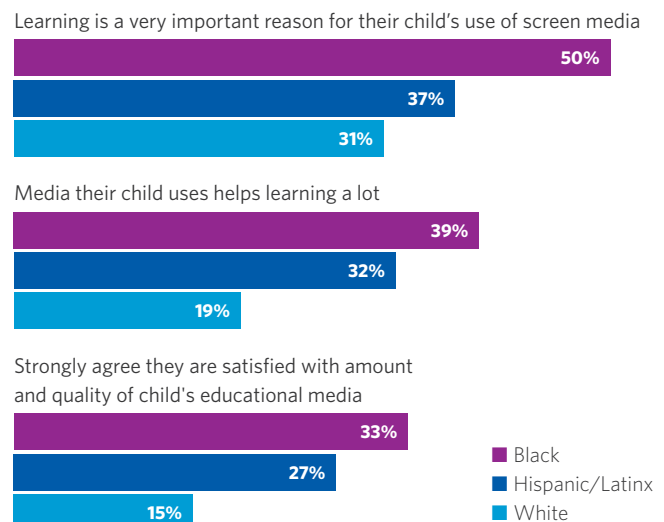
FIGURE H. Parents' Views on the Effects of Children's Screen Media Use, 2020

Among parents of 0- to 8-year-old screen users, percent who say their child's media use mostly helps/hurts their …

Learning
72% | 8%

Creativity
60% | 11%

Social skills
34% | 19%

Physical activity
16% | 43%
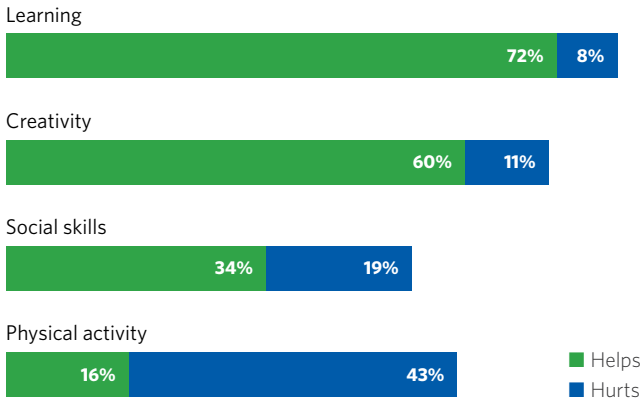
■ Helps
■ Hurts

Note: Includes those saying media use helps or hurts "a lot" and "a little."
Doesn't show percent who say "Makes no difference one way or the other."

6. Parents of 0- to 8-year-olds have overwhelmingly positive views of the screen media their children use.

The majority don't report being concerned about the amount of time their kids spend with screens, the impact screen media has on their child, the quality of the content available to them, or the challenges of getting their children to disengage with screens when it's time for other activities.

Six in 10 (60%) parents whose children use screen media say their child spends "the right amount of time" with screens, and 75% say they are satisfied with the amount and quality of the educational media available to their children. Nearly three-quarters (72%) say the media their child uses help the child's learning, and 60% say media help the child's creativity. Most (59%) say they don't find it difficult to get their child to stop using media when they ask, although 40% find it at least somewhat difficult. The only aspect of children's media use that parents are clearly more negative than positive about is its effect on children's physical activity: Forty-three percent say it has a negative effect.

7. The amount of time children from lower-income families spend reading has increased.

Both the frequency and amount of time spent reading among children from lower-income households have increased. The proportion of children in lower-income households who are daily readers—that is, who read or are read to every day—has increased by 10 percentage points over the past three years, from 40% to 50%. (The rate of daily reading has not changed among the other income groups.) The daily time spent reading among children from lower-income families is up by an average of 17 minutes per day (from 26 to 43 minutes a day). E-reading now accounts for 10 minutes a day, on average, among lower-income children, compared to just three minutes a day among their peers in higher-income families.
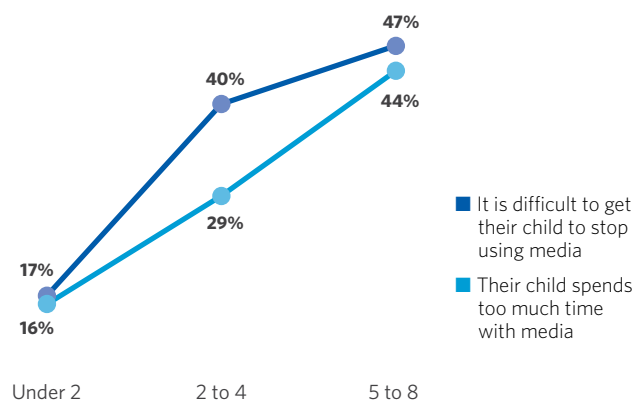
8. Among 5- to 8-year-olds, media use becomes more independent, mobile, and social than among younger children.

Most screen use among children this age occurs without their parents. Parental co-use goes down dramatically as the child's age goes up: The proportion of parents who say they use media "most of the time" with their 5- to 8-year-old child ranges from 11% to 19%, depending on the media activity (compared to 37% to 62% for parents of children under 2). More than two-thirds (67%) of 5- to 8-year-olds have their own mobile device, and on average, children in this age group spend an hour and 15 minutes a day using mobile media. Among 5- to 8-year-olds, 44% of parents say their child spends too much time with media, and nearly half (47%) say that it can be difficult to get their child to stop using media.

Among the 95% in this age group who watch online videos, the children themselves are most likely to select what to watch (rather than the parent), either through their own searching, autoplay, or "suggested" videos on the platform or from channels the child follows.

FIGURE I. Parents' Views About Children's Media Time, by Age, 2020

Among parents of 0- to 8-year-olds, percent who say ...

- ■ It is difficult to get their child to stop using media
- ■ Their child spends too much time with media

FIGURE J. Choosing/Co-Viewing Online Videos, by Age, 2020

- 26% Child chooses videos
- 19% Parent chooses videos
- 18% Parent co-views videos with the child most of the time
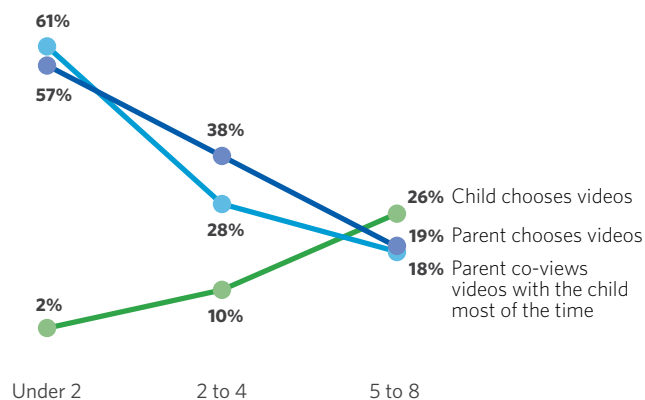
THIS REPORT PRESENTS THE results of a nationally representative, probability-based online survey of 1,440 parents of children age 8 or younger, conducted from February 18 through March 13, 2020. The survey is the fourth in a series of cross-sectional tracking surveys conducted by Common Sense. Previous surveys were conducted in 2011, 2013, and 2017.

The survey was designed by Common Sense and VJR Consulting and fielded (in English and Spanish) by the research firm Ipsos, using their probability-based web panel **KnowledgePanel**©. The project was directed by Michael Robb, director of research at Common Sense, and Victoria Rideout of VJR Consulting. Data analyses were conducted by Ms. Rideout and by Melissa Saphir of Saphir Research Services. The report was written by Ms. Rideout.

Text of the survey. To the extent possible, the 2020 survey instrument duplicates the questions asked in previous years, with updated items reflecting newer trends. The full text of the questionnaire (excluding screener) is included in the Appendix to this report. In cases where the question wording or structure has changed, those changes are noted in the relevant tables.

Survey sample. KnowledgePanel is the first and largest online research panel that is representative of the entire U.S. population. Hence, it is the largest national sampling frame from which fully representative samples can be generated to produce statistically valid inferences for study populations. Panel members are randomly recruited through probability-based sampling, and households are provided with access to the internet and hardware if needed. Ipsos recruits panel members using address-based sampling methods. Once household members are recruited for the panel and assigned to a study sample, they are notified by email for survey taking, or panelists can visit their online member page to take the survey. The use of a probability sample means the results are substantially more generalizable to the U.S. population than are results based on "convenience" or "opt-in" samples. Convenience and opt-in samples include only respondents who are already online and/or who volunteer through word of mouth or advertising to participate in surveys.

Over-samples. Over-samples of Black (*n* = 253) and Hispanic/Latinx (*n* = 298) respondents were included in the survey. Those samples were then weighted back to their representative level for analyzing the survey results as a whole.

Margin of error. The margin of error for the full sample at a 95% confidence level is +/- 3.11%.

Respondent compensation. Respondents received a cash equivalent of $5 for their participation; some Black respondents received an additional $5 or $10 equivalent to improve response rates among this lower-incidence demographic group.

Treatment of outliers. Of the 1,457 qualified completed surveys, 17 cases were removed from the data file; four for "speeding" through the survey and refusing every question and 13 outliers who were excluded due to reporting media use times of greater than 24 hours for their child.

Weighting. The use of probability-based recruitment methods for the KnowledgePanel is designed to ensure that the resulting sample properly represents the population of the United States geographically, demographically (e.g., age, gender, race/ethnicity, and income), and in terms of home internet access. Study-specific post-stratification weights were applied once the data was finalized, to adjust for any survey nonresponse and to ensure the proper distributions for the specific target population (in this case, parents of 0- to 8-year-olds). Geodemographic distributions for this population were obtained from March 2019 supplemental data from the U.S. Census Bureau's Current Population Survey. The following table indicates how the unweighted and weighted samples compare to the benchmarks, using Census Bureau categories.

DEMOGRAPHICS OF SURVEY SAMPLE

Among U.S. parents of children age 0 to 8	Unweighted *n*	Unweighted percentage	Benchmark percentage*	Weighted percentage
Race/ethnicity				
• White, non-Hispanic	795	55%	57%	57%
• Hispanic	298	21%	22%	22%
• Black, non-Hispanic	253	18%	11%	10%
• Other, non-Hispanic	60	4%	9%	9%
• 2+ races, non-Hispanic	34	2%	1%	1%
Language				
• Hispanic, bilingual (English and Spanish)	158	11%	13%	13%
• Hispanic, Spanish dominant	51	4%	5%	5%
Parent gender				
• Male	781	54%	45%	55%
• Female	659	46%	55%	45%
Region				
• Northeast	182	13%	16%	15%
• Midwest	334	23%	21%	21%
• South	579	40%	38%	38%
• West	345	24%	24%	25%
Parent education				
• Less than high school	84	6%	10%	9%
• High school diploma	272	19%	24%	24%
• Some college	380	26%	25%	25%
• College degree or higher	704	49%	41%	41%
Household income				
• <$25,000	204	14%	10%	10%
• $25,000 to $49,999	288	20%	18%	17%
• $50,000 to $74,999	223	15%	17%	17%
• $75,000 to $99,999	205	14%	15%	15%
• $100,000 to $149,999	284	20%	20%	20%
• $150,000+	236	16%	21%	21%

*March 2019 Current Population Survey Supplement

Demographic Definitions

Age. Findings are presented for the full survey sample of 0- to 8-year-olds, and for three subgroups, based on stages of child development. The subgroups are from birth to 23 months (babies and toddlers); from age 2 through 4 (preschoolers); and from age 5 through 8 (school-age children).

Gender. As part of the screener for the survey, parents were asked whether their child was male, female, or other/nonbinary. Findings are presented for the full survey sample, and where relevant for male and female children. (The sample size for the "other/nonbinary" category was not sufficient to present those findings separately.)

Household income. For purposes of this report, "lower-income" is defined as families earning less than $30,000 a year; "middle-income" includes those earning between $30,000 and $75,000 a year; and "higher-income" is families earning more than $75,000 a year. For the purpose of making comparisons over time, we have retained these income categories from 2011. We recognize that there are differing definitions of income level and that these standards change over time. For reference, the federal poverty guideline for a family of four in the United States in 2020 is $26,000,[1] and the median household income as of 2019 is approximately $62,000.[2]

Parent education. Levels of parent education are collapsed into three categories for this report, using the parent who attained the highest level of education: high school diploma or less (includes those who did not finish high school, those with a GED, and high school graduates); some college (including an associate degree or incomplete bachelor's degree); and college degree or higher (includes those with a bachelor's or graduate degree).

Race/ethnicity. The terms "African American" and "Black" are used interchangeably in the report to refer to any respondents who self-identify as "Black, non-Hispanic." The term "White" refers to any respondents who self-identify as "White, non-Hispanic." The term "Hispanic/Latinx" refers to any respondents who self-identify as Hispanic. All respondents, including those who are not part of these three major categories, are included in results based on the total sample. This includes individuals who self-identify as another racial group (for example, Asian American, Pacific Islander, or Native American) or as two or more races, none of which is Hispanic. Where findings are broken out by race/ethnicity, results are presented for White, Black, and Hispanic/Latinx children; the sample sizes for the other racial and ethnic groups were not large enough to examine individually.

Presentation of Data in the Text

Notation of hours and minutes. Throughout the report, times spent with media are presented in hours:minutes. For example, two hours and 10 minutes is presented as 2:10, and 10 minutes is presented as :10.

Percentages. Totals will not always add up to 100 due to rounding, multiple response options, or because they do not include respondents who marked "don't know" or did not respond to that particular question.

Statistical significance. Where relevant, differences over time or between demographic groups have been tested for statistical significance. Unless otherwise noted, findings are described in the text in a comparative manner (e.g., "more than," "less than") only if the differences are statistically significant at the level of $p < .05$. In tables where statistical significance has been tested, superscripts (using letters such as *a*, *b*, or *c*) are used to indicate whether results differ at a statistically significant level within a set of columns or rows (e.g., parent race/ethnicity, or 2011 vs. 2020). Data points that share a common superscript, and data points that have no superscript at all, are not significantly different from each other.

Estimating time spent with media. Findings that concern the amount of time children spend in various media activities are based on parents' responses to questions about their child's activities the previous day. Parents were asked about a specific, randomly selected focal child in their household. No parent's estimate of their child's media use is likely to be exact. But by asking parents to focus on a specific day in their child's life (the day prior to taking the survey), we hope to elicit more precise estimates of children's media use than by asking about a "typical day." Surveying was spread out over the seven days of the week to avoid any bias toward either weekdays or weekend days. Unless otherwise noted, the results presented in this report are the mean time among all respondents, reflecting both the

---

1. Department of Health and Human Services. (2020). *Poverty guidelines*. Office of the Assistant Secretary for Planning and Evaluation (ASPE). https://aspe.hhs.gov/poverty-guidelines

2. US Census Bureau. (2019). *U.S. median household income up in 2018 from 2017*. United States Census Bureau. https://www.census.gov/library/stories/2019/09/us-median-household-income-up-in-2018-from-2017.html

proportion of children who engage in an activity and the amount of time they spend doing so. On occasion we also report time spent "among users," which is the average (mean) time spent among those who engaged in that activity the previous day. When times for various activities are summed, the sums do not account for the possibility that children may have been engaging in more than one media activity at a time (e.g., playing a mobile game while watching television). There is no objective, passive way of measuring the time children spend engaging in the full range of media activities covered in this report, or measuring the amount of their media time that may have been spent engaging in more than one media activity.

Media Definitions

Console gaming. Includes games played on console players (e.g., Xbox, PlayStation, or Wii), or other gaming devices that connect to a TV set (e.g., the Nintendo Switch).

Educational game device. Includes devices designed specifically for children for educational purposes (e.g., LeapFrog, LeapPad, or VTech laptop).

E-reading. Reading on a tablet, phone, or e-reader (e.g., a Kindle). Includes time the child spends reading or being read to by someone else.

Internet access. Any internet access other than dial-up, such as cable, wireless, or DSL. Participants without internet access have dial-up access or no access.

Live television. Content watched on a TV set on a broadcast or cable station as it was aired (i.e., not time-shifted).

Mobile media. "Any mobile device" and "mobile media use" includes smartphones, tablets, and other devices (e.g., the iPod touch) that can connect to the Internet, display videos, and download apps.

Online videos. Includes watching videos on sites like YouTube or TikTok.

Screen media. Refers to all visually based screen activities, including watching television, DVDs/videotapes, online videos, or programming through a subscription service (e.g., Netflix, Hulu, or Amazon Prime Video); playing video games (including console, computer, or mobile); electronic reading on a device (e.g., a smartphone, tablet, or e-reader); using a virtual reality headset; video-chatting (e.g., on Skype or FaceTime); doing homework or schoolwork on a computer or tablet; and doing

anything else visual on a smartphone, tablet, iPod touch, or similar device, such as taking or viewing pictures or videos, looking things up, social networking, or using other types of apps not already covered in the previous activities. Does not include listening to music or other audio (e.g., podcasts or audiobooks).

Smart speaker. A device that can respond to verbal commands, play music, and answer questions (e.g., Amazon Echo, Dot, Google Home or Apple HomePod).

Smart TV. A TV set that is connected to the internet, whether directly or through an add-on device (e.g., Apple TV or Roku) to download or stream TV shows or movies onto the TV set.

Smartwatch. A watch that can make phone calls, track the wearer, and display games and text messages.

Social gaming. Online gaming in which the player can play and interact with other users.

Streaming. Watching TV shows or movies through a subscription service (e.g., Netflix, Amazon Prime, Disney Plus, or Vudu) or through a network's website. Content may be watched on a TV set, computer, or mobile device.

Subscription service. A service that enables users to stream or download TV shows or movies (e.g., Netflix, Hulu, Disney Plus, or Amazon Prime Video).

Tablet. An iPad or similar device (e.g., a Galaxy Tab or other Android tablet, Microsoft Surface, or Kindle Fire). Does not include devices designed exclusively as e-readers.

Television. Includes TV shows or movies watched on a TV set, including "live TV" or content recorded earlier on a DVR, or watched through video on demand.

Video games. Includes gaming on a console video game player or other device that connects to a TV set (e.g., an Xbox, PlayStation, Switch, or Wii), a handheld player (e.g., a Gameboy or Nintendo DS), a computer, or a mobile device (e.g., a smartphone or tablet).

Virtual reality. Games or movies that are watched through a special headset (e.g., Oculus Rift, Google Cardboard or PlayStation VR), in which the user is immersed in a multidimensional media environment that responds to their movements.

TABLE A. Time Spent with Media, by Activity, 2011 to 2020

Among 0- to 8-year-olds, average amount of time spent in a typical day …	2011	2013	2017	2020
Watching television/videos	**1:44**[a]	**1:27**[b]	**1:40**[a]	**1:45**[a]
• Television	1:09[a]	:51[b]	:37[c]	:24[d]
• *As aired*	*N/A*	*:39*[a]	*:27*[b]	*:18*[c]
• *Recorded/on demand*	*N/A*	*:12*[a]	*:10*[a]	*:06*[b]
• Online/subscription	:04[a]	:14[b]	:46[c]	1:09[d]
• *Streaming/subscription*	*N/A*	*N/A*	*:27*	*:30*
• *Online videos (YouTube/social/other)*	*N/A*	*N/A*	*:19*[a†]	*:39*[b]
• DVDs[‡]	:31[a]	:22[b]	:17[c]	:12[d]
Reading/being read to	**:29**[a]	**:28**	**:29**	**:32**[b]
• Print	:29	:28	:26	:28
• Electronic	N/A	N/A	:03	:04
Playing video games	**:25**	**:23**	**:25**	**:23**
• Console games	:14[a]	:10[ac]	:06[b]	:07[bc]
• Computer games	:08[a]	:05[b]	:03[c]	:03[c]
• Mobile games	:03[a]	:08[b]	:16[c]	:13[c]
Listening to audio	**:29**[a]	**:20**[b]	**:18**[b]	**:27**[a]
• Music	:29[a]	:20[bc]	:18[b]	:25[ac]
• Podcasts/stories/audiobooks	N/A	N/A	N/A	:02
Other digital activities	**:07**[a]	**:05**[a]	**:11**[b]	**:12**[b]
• Video-chatting	N/A	N/A	:01	:01
• Homework/educational[§]	:05	:03[a]	:02[b]	:02
• Virtual reality	N/A	N/A	★	★
• Anything else[#]	:02[a]	:02[a]	:08[b]	:09[b]
Total screen media	**2:16**[a]	**1:55**[b]	**2:19**[ac]	**2:24**[c]
Total media	**3:14**[a]	**2:43**[b]	**3:06**[a]	**3:19**[a]

*Less than one minute but more than zero.

[†] In this table in the 2017 report, "online videos" did not include the "other" category, so the total time was listed as 17 minutes instead of 19.

[‡] Prior to 2020, this item also included time spent watching videotapes.

[§] Prior to 2020, time spent doing homework digitally was measured on computers; in 2020 tablets were also included.

[#] Such as taking or looking at photos or videos, looking things up, social networking, or using other types of activities or apps not already covered.

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those that share a common superscript, do not differ significantly. Significance should be read across rows (over time).

TABLE B. Time Spent with Media, by Activity and Age, 2020

Among 0- to 8-year-olds, average amount of time spent in a typical day …	Under 2	2 to 4	5 to 8
Watching television/videos	**:45[a]**	**2:02[b]**	**2:00[b]**
• Television	:18[a]	:25[b]	:27[b]
• *As aired*	*:16*	*:18*	*:20*
• *Recorded/on demand*	*:02[a]*	*:07[b]*	*:07[b]*
• Online/subscription	:17[a]	1:21[b]	1:24[b]
• *Streaming/subscription*	*:13[a]*	*:33[b]*	*:35[b]*
• *Online videos (YouTube/social/other)*	*:04[a]*	*:48[b]*	*:49[b]*
• DVDs[†]	:10	:16[a]	:09[b]
Reading/being read to	**:28**	**:33**	**:34**
• Print	:26	:28	:29
• Electronic	:02	:05	:05
Playing video games	**:01[a]**	**:15[b]**	**:40[c]**
• Console games	:00[a]	:04[b]	:14[c]
• Computer games	★[a]	:01[a]	:05[b]
• Mobile games	:01[a]	:10[b]	:21[c]
Listening to audio	**:35[a]**	**:33[a]**	**:20[b]**
• Music	:34[a]	:31[a]	:17[b]
• Podcasts/stories/audiobooks	:01	:02	:03
Other digital activities	**:01[a]**	**:08[b]**	**:20[c]**
• Video-chatting	★	:01	:01
• Homework/educational[‡]	★[a]	★[a]	:05[b]
• Virtual reality	:00	★	★
• Anything else[§]	:01[a]	:07[b]	:14[c]
Total screen media	**:49[a]**	**2:30[b]**	**3:05[c]**
Total media	**1:50[a]**	**3:31[b]**	**3:54[b]**

*Less than one minute but more than zero.
[†] Prior to 2020, this item also included time spent watching videotapes.
[‡] Prior to 2020, time spent doing homework digitally was measured on computers; in 2020 tablets were also included.
[§] Such as taking or looking at photos or videos, looking things up, social networking, or using other types of activities or apps not already covered.

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (between age groups).

TABLE C. Media in the Home, 2011 to 2020

Among 0- to 8-year-olds, percent who live in homes with …	2011	2013	2017	2020
Television				
• TV set	98%[a]	96%[b]	98%[a]	97%[ab]
• DVD player	80%[a]	78%[a]	86%[b]	N/A
• Internet-connected television	N/A	30%[a]	75%[b]	84%[c]
• Subscription service (e.g., Netflix, Hulu)	N/A	N/A	72%[a]	87%[b]
• Cable/satellite	68%[ab]	70%[a]	65%[b]	45%[c]
• DVR	35%[a]	28%[b]	44%[c]	N/A
• HD antenna	N/A	N/A	29%	N/A
Computer				
• Computer (laptop or desktop)	72%[a]	76%[a]	91%[b]	88%[b]
• Internet access	68%[a]	69%[a]	90%[b]	89%[b]
Mobile				
• Any mobile device	52%[a]	75%[b]	98%[c]	98%[c]
• *Smartphone*	*41%[a]*	*63%[b]*	*95%[c]*	*97%[d]*
• *Tablet*	*8%[a]*	*40%[b]*	*78%[c]*	*75%[c]*
• *iPod Touch*	*21%[a]*	*27%[b]*	*21%[a]*	*20%[a]*
Video game player				
• Console video game player	67%	64%[a]	69%[b]	67%
• Hand-held video game player	44%[a]	35%[b]	31%[c]	N/A
Other				
• E-reader (e.g., Kindle, Nook)	9%[a]	21%[b]	29%[c]	31%[c]
• Smart speaker (e.g., Amazon Echo, Google Home)	N/A	N/A	9%[a]	41%[b]
• Virtual reality headset	N/A	N/A	11%	11%
Child's own device				
• Any mobile device	3%[a]	12%[b]	45%[c]	48%[c]
• *Tablet*	*★[a]*	*7%[b]*	*42%[c]*	*44%[c]*
• *Smartphone*	*★[a]*	*★[a]*	*4%[b]*	*8%[c]*
• *iPod Touch or similar*	*3%[a]*	*5%[b]*	*5%[b]*	*4%[ab]*
• Educational game device	29%[ab]	26%[ac]	33%[b]	25%[c]
• Hand-held game player	24%[a]	21%[a]	14%[b]	N/A
• Smartwatch	N/A	N/A	N/A	5%

*Greater than zero but less than one-half percent.

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).

TABLE D. Daily Media Use, by Activity, 2011 to 2020

Among 0- to 8-year-olds, the percent who engage in each activity at least once or more per day	2011	2013	2017	2020
• Read/are read to	58%	60%	57%	59%
• Any television/videos	67%[a]	61%[b]	60%[b]	60%[b]
• *Watch television*	65%[a]	58%[b]	53%[c]	51%[c]
• *Watch online videos*	N/A	N/A	24%[a]	34%[b]
• *Watch DVDs/videotapes*	25%[a]	18%[b]	11%[c]	N/A
• Use mobile device	8%[a†]	17%[b]	28%[c]	30%[c]
• Use a computer	14%[ab]	14%[a]	11%[bc]	9%[c]
• Hand-held video game	N/A	7%[a]	4%[b]	N/A
• Console video game	9%[a]	6%[b]	6%[b]	7%[ab‡]
• Read an ebook	2%[a]	4%[b]	N/A	N/A
• Listen to podcasts/stories/audiobooks	N/A	N/A	N/A	5%

[†] In 2011, question included hand-held video game players.
[‡] In 2020, this item included hand-held players such as the Switch.

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).

IN EARLY 2020, PRIOR to the school closings and orders to stay at home due to the coronavirus pandemic, children age 8 and younger used an average of two hours and 24 minutes a day of screen media (and an additional 55 minutes of nonscreen media, such as reading print and listening to music and other audio content; see Table A on page 13). Within that average daily use, there is a lot of variation: In any given day, about a quarter (23%) of children don't use any screen media, a quarter (27%) use screen media between one and two hours, and a quarter (24%) use screen content for more than four hours (see Figure 1).

Looking at the big picture, the broad pattern of screen media use among children age 8 and younger has remained fairly stable over the past nine years of this tracking survey. That is, the vast majority of screen time (73%) is devoted to watching television and videos (see Figure 2), although the platforms and devices have shifted (live television and DVDs down; mobile and streamed content up). The amount of time spent gaming has remained remarkably steady (accounting for 16% of screen use in 2020), although once again the devices used have shifted (console and computer games down; mobile games up).

And—at least prior to the coronavirus pandemic—electronic reading, homework, and video-chatting still account for only a very small portion of children's screen use (3%, 1%, and 1% of total screen use, respectively). The total amount of screen use in a typical day averages just eight minutes more today than in 2011 (see Table A on page 13). Nearly half (49%) of children often (19%) or sometimes (30%) watch television or videos, or play video games in the hour before bedtime.

Demographic differences. Use of screen media varies substantially by age (see Table B on page 14). Toddlers and babies younger than 2 average 49 minutes a day of screen media; 2- to 4-year-olds average two and a half hours a day (2:30); and 5- to 8-year-olds just over three hours (3:05). In any given day, more than half (56%) of children under 2 don't use screen media at all, compared to 16% of 2- to 4-year-olds and 13% of 5- to 8-year-olds.

On average, boys use 35 minutes more screen media than girls do per day (2:40 vs. 2:05). This includes 17 minutes more per day with television and videos than girls, and 17 minutes more per day

FIGURE 1. Screen Use, by Hours, 2020
Among 0- to 8-year-olds, proportion who use screen media for …

- >4 hours
- 2 to 4 hours
- 1 to 2 hours
- <1 hour
- None
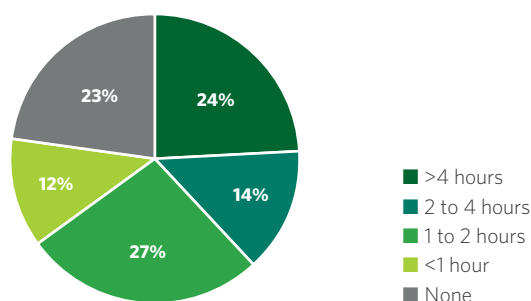
FIGURE 2. Screen Use, by Activity, 2020
Among 0- to 8-year-olds, proportion of average daily screen time devoted to …

- TV/video viewing
- Gaming
- Reading (electronic)
- Homework
- Video-chatting
- Other/unknown
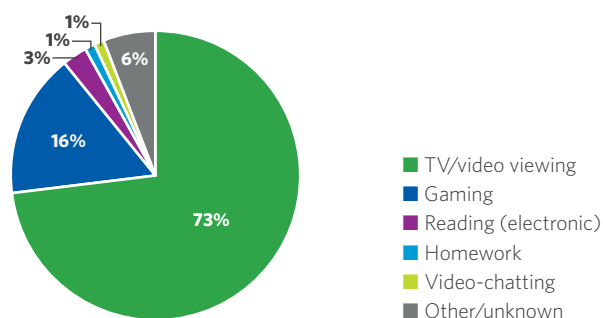
playing video games (see Table 1). In previous waves of the survey, differences in overall screen use between boys and girls were not statistically significant.

There are large differences in total screen time among children from different socioeconomic groups, including race/ethnicity, household income, and parent education (see Figure 3). For example, Black children average 2:17 more screen use per day than White children, and an hour (1:06) more than Hispanic/Latinx children. Looked at by family income, children in lower-income households average about an hour (1:05) more per day in screen use than children from middle-income families, and almost two hours (1:56) more than children in higher-income families.
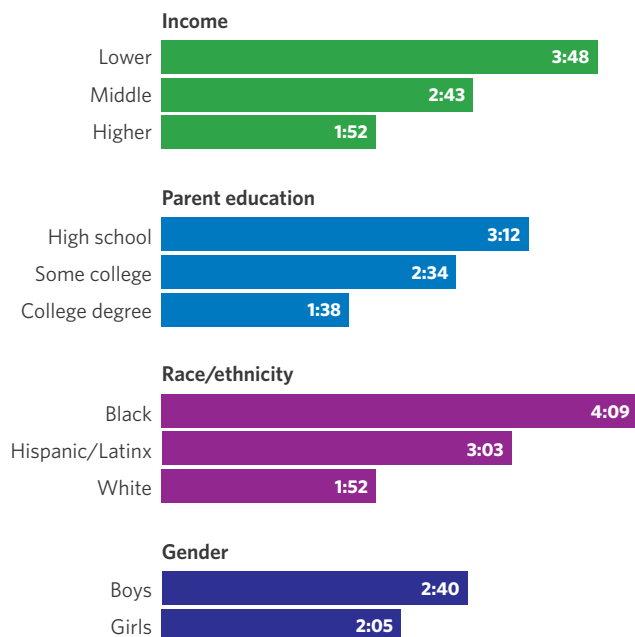
TABLE 1. Screen Media Use, by Activity and Gender, 2020

Among 0- to 8-year-olds, average time spent with screen media per day

	All	Boys	Girls
Watching television/videos	**1:45**	**1:52[a]**	**1:35[b]**
• Television (as aired, recorded, or on demand)	:24	:32[a]	:13[b]
• DVDs	:12	:10	:13
• Online (YouTube, social videos, other)	:39	:43	:34
• Streaming service	:30	:27	:22
Reading (screen only)	**:04**	**:04**	**:05**
Playing video games	**:23**	**:31[a]**	**:14[b]**
• Console games	:07	:13[a]	:02[b]
• Computer games	:03	:03	:01
• Mobile games	:13	:15[a]	:11[b]
Other digital activities	**:12**	**:13**	**:11**
• Video-chatting	:01	:01	:01
• Homework (screen only)	:02	:02	:03
• Other	:09	:10	:07
Total screen media	**2:24**	**2:40[a]**	**2:05[b]**

Note: Items with different superscripts differ significantly ($p < .05$) between girls and boys. Items in the gender columns without a superscript, or those with the same superscript, do not differ significantly.

FIGURE 3. Screen Media Time, by Demographic Group, 2020

Among 0- to 8-year-olds, average time spent with screen media per day

Income
- Lower: 3:48
- Middle: 2:43
- Higher: 1:52

Parent education
- High school: 3:12
- Some college: 2:34
- College degree: 1:38

Race/ethnicity
- Black: 4:09
- Hispanic/Latinx: 3:03
- White: 1:52

Gender
- Boys: 2:40
- Girls: 2:05

Notes: *Lower income* is less than $30,000 a year; *middle income* is $30,000 to $75,000 a year; and *higher income* is more than $75,000 a year. Within each demographic category, differences between groups are statistically significant ($p < .05$).

While White children's screen usage is about the same as it was in 2011 (1:52 a day in 2020, compared to 1:55 a day in 2011), Black children's screen use has increased substantially over time, from 3:07 in 2011 to 4:09 today (see Table 2). Similarly, the difference in screen use between the lowest and highest income groups was 40 minutes a day in 2011, but has grown to nearly two hours (1:56) today. Screen use among children in lower-income households has increased an average of 1:16 a day since 2011 (from 2:32 to 3:48 a day), whereas among those from higher-income households, it has stayed exactly the same (1:52 in both 2011 and 2020).

It appears that the growing differential in screen use by race and income may be due to both the expansion in access to mobile devices, and the fact that mobile media use has been embraced much more enthusiastically among lower-income families than higher-income families, and among children of color versus White children. In 2011 and 2013, mobile device use among 0- to 8-year-olds was very limited across all demographics. But as smartphone and tablet usage began to accelerate in 2017, it grew even faster among African American children and children from lower-income families; that trend became even more pronounced in 2020. For example, in 2011 White children averaged four minutes a day of mobile media use, 42 minutes a day in 2017, and 37 minutes in 2020. But in 2011, Black children averaged eight minutes a day, 1:06 in 2017, and 1:44 in mobile media use in 2020 (see Table 3).

TABLE 2. Screen Media Use Within Demographic Group over Time, 2011 to 2020

Among 0- to 8-year-olds, average screen media use per day

	2011	2013	2017	2020
Race/Ethnicity				
• Black	3:07[a]	2:26[a]	2:51[a]	4:09[b]
• Hispanic/Latinx	2:35[a]	1:57[b]	2:36[a]	3:03[a]
• White	1:55[a]	1:58[a]	2:11[b]	1:52[a]
Income				
• Lower	2:32[a]	2:17[a]	3:29[b]	3:48[b]
• Middle	2:18	2:01[a]	2:25[b]	2:43[b]
• Higher	1:52	1:48[a]	1:50	1:52[b]
Parent education				
• High school or less	2:39[ab]	2:14[a]	2:50[bc]	3:12[c]
• Some college	2:18	2:11[a]	2:37[b]	2:34[b]
• College degree	1:33	1:31[a]	1:37[b]	1:38[b]

TABLE 3. Mobile Media Use Within Demographic Group over Time, 2011 to 2020

Among 0- to 8-year-olds, average time spent with mobile media per day

	2011	2013	2017	2020
Race/Ethnicity				
• Black	:08[a]	:19[b]	1:06[c]	1:44[d]
• Hispanic/Latinx	:05[a]	:14[a]	:56[b]	1:19[c]
• White	:04[a]	:16[b]	:42[c]	:37[c]
Income				
• Lower	:03[a]	:13[b]	1:13[c]	1:43[c]
• Middle	:04[a]	:18[b]	:50[c]	:59[c]
• Higher	:07[a]	:18[b]	:37[c]	:40[c]
Parent education				
• High school or less	:05[a]	:14[b]	1:01[c]	1:19[c]
• Some college	:05[a]	:24[b]	:52[c]	:58[c]
• College degree	:06[a]	:13[b]	:32[c]	:35[c]

TABLES 2 AND 3:

Notes: *Lower income* is less than $30,000 a year; *middle income* is $30,000 to $75,000 a year; and *higher income* is more than $75,000 a year. Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).
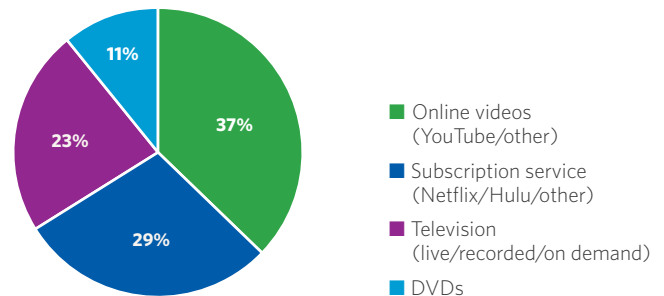
TELEVISION, STREAMING, AND ONLINE VIDEOS

WATCHING SOME TYPE OF video content—whether television, DVDs, streaming videos, or online videos—continues to be the main reason children use screen devices, accounting for nearly three-quarters (73%) of all screen time (see Figure 2 on page 17). Sixty percent of children age 8 and under watch television or videos "every day" (see Table D on page 16). On average, 0- to 8-year-olds spend 1:45 a day watching video content (Table A). The amount of time spent watching varies by age, with those under 2 averaging about 45 minutes a day, and those age 2 and older averaging about two hours a day (2:02 for 2- to 4-year-olds, and 2:00 for 5- to 8-year-olds; see Table B on page 14). This includes slightly more than a half hour a day of mobile video viewing among those 2 and older (:37 among 2- to 4-year-olds, and :33 among 5- to 8-year-olds).

The total amount of time children spend watching television or video content in 2020 is almost identical to what it was in 2011, but the platforms used continue to change rapidly. Online videos on sites like YouTube and subscription services, such as Netflix or Hulu, now constitute two-thirds of children's television and video viewing (66%), while traditional television—either live, recorded, or on demand—accounts for just 23% (DVDs comprise 11%) (see Figure 4). Of the total time 0- to 8-year-olds spend watching video content (1:45), just 18 minutes is devoted to watching TV shows at the time they air, and another six minutes to watching shows that were recorded earlier or watched on demand. The largest chunk of time is spent watching online videos, such as on YouTube or other sites (:39 a day), followed by 30 minutes a day spent watching content through a streaming service (see Table 4).

FIGURE 4. Television/Video Viewing, by Type, 2020
Among 0- to 8-year-olds, proportion of total TV/video viewing that occurred through …

- Online videos (YouTube/other) — 37%
- Subscription service (Netflix/Hulu/other) — 29%
- Television (live/recorded/on demand) — 23%
- DVDs — 11%

TABLE 4. Television/Video Viewing, by Type, 2011 to 2020
Among 0- to 8-year-olds, average daily time spent watching

	2011	2013	2017	2020
Television	**1:09[a]**	**:51[b]**	**:37[c]**	**:24[d]**
As aired	N/A	:39[a]	:27[b]	:18[c]
Recorded/on demand	N/A	:12[a]	:10[a]	:06[b]
Online/subscription	**:04[a]**	**:14[b]**	**:46[c]**	**1:09[d]**
Subscription service (e.g., Netflix, Hulu)	N/A	N/A	:27	:30
Online videos (YouTube, other)	N/A	N/A	:19[a†]	:39[b]
DVDs[‡]	**:31[a]**	**:22[b]**	**:17[c]**	**:12[d]**
Total television/video	**1:44[a]**	**1:27[b]**	**1:40[a]**	**1:45[a]**

[†] In this table in the 2017 report, *online videos* did not include the *other* category, so the total time was listed as 17 minutes instead of 19.
[‡] Prior to 2020 this item also included time spent watching videotapes.

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).

Television environment in the home. Many children continue to live in homes where the TV set is left on most of the time, whether or not anyone is watching it (Figure 5). Nearly 4 in 10 (39%) parents say the television is either "always" on (10%), or on "most of the time" (29%). This proportion has remained consistent over the past decade (39% in 2011, 36% in 2013, and 42% in 2017). Children in those homes have also consistently watched far more television than other children their age: In 2020, those in homes where the TV set is left on all or most of the time whether or not anyone is watching spend an average of 1:31 a day watching television (including subscription service or online videos watched through a TV set), compared to 52 minutes a day for those who say it's left on "some of the time," and less than a half hour a day (:28) for those whose parents say the television is either "hardly ever" or "never" left on if no one is watching it (see Figure 6).

Smart TVs, cable, and subscription services. Television and movie subscription services such as Netflix and Hulu have become widely prevalent in children's homes, nearly double the rate of cable subscriptions, and "smart" TVs (i.e., TV sets connected to the internet) are now the norm (84% of homes have one, compared to just 30% in 2013; see Table 5). Today, 87% of 0- to 8-year-olds live in a home with a subscription to a streaming service, compared to 45% with cable. There has been a substantial drop-off in cable subscriptions over the past three years, from 65% in 2017 down to 45% in early 2020. Subscriptions to streaming services are commonplace, even among lower-income homes (79%), and cable subscriptions are low, even among higher-income homes (see Table 6).

FIGURE 5. Background Television, 2020

Among 0- to 8-year-olds, percent who live in homes where the TV set is left on, whether or not anyone is watching

- Always
- Most of the time
- Some of the time
- Hardly ever
- Never
- No TV in the home
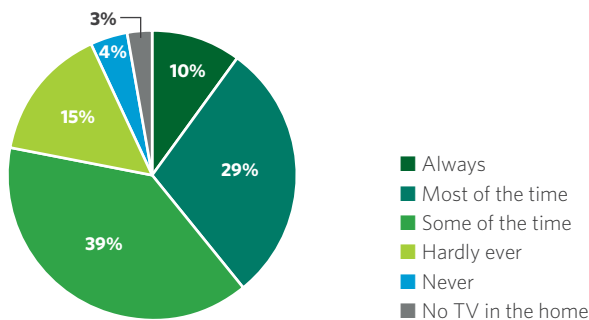
FIGURE 6. Relationship Between Television Viewing and Background Television, 2020

Among 0- to 8-year-olds, average daily time spent watching television, by amount of time TV set is left on even if no one is watching

| Hardly ever/Never | Some of the time | All/Most of the time |
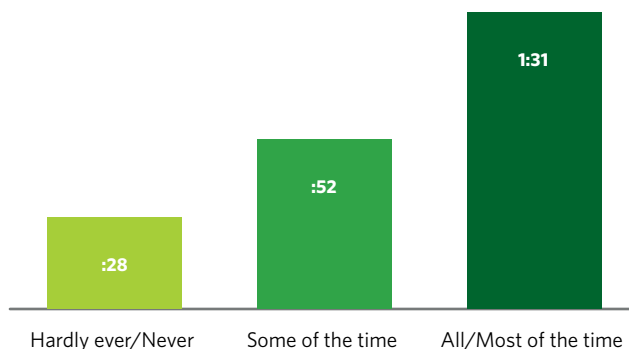
TABLE 5. TV/Video Equipment in the Home, 2011 to 2020

Among 0- to 8-year-olds, percent who live in homes with …

	2011	2013	2017	2020
Television	98%[a]	96%[b]	98%[a]	97%[ab]
Internet-connected TV	N/A	30%[a]	75%[b]	84%[c]
Subscription service	N/A	N/A	72%[a]	87%[b]
Cable	68%[ab]	70%[a]	65%[b]	45%[c]

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).

TABLE 6. TV/Video Equipment in the Home, by Income, 2020

0- to 8-year-olds who live in homes with …

	Lower	Middle	Higher
Television	98%	96%	98%
Internet-connected TV	70%[a]	83%[b]	89%[c]
Subscription service	79%[a]	83%[a]	91%[b]
Cable	45%	38%[a]	49%[b]

Note: *Lower income* is less than $30,000 a year; *middle income* is $30,000 to $75,000 a year; and *higher income* is more than $75,000 a year. Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (between income groups).

Online videos. As mentioned above, watching online videos on sites such as YouTube now constitutes the largest proportion of children's viewing, at an average of 39 minutes a day—more than double the amount of time devoted to online videos three years ago (:19; see Table A on page 13). About a third (34%) of children age 8 and younger watch online videos every day, up from 24% three years ago. There have been increases in daily use of online videos across all age groups; among children under 2, the proportion who watch "every day" went from 8% to 17% from 2017 to 2020; among 2- to 4-year-olds it went from 27% to 39%; and among 5- to 8-year-olds from 30% to 39% (see Table 7).

TABLE 7. Daily Online Video Use, by Age, 2017 vs. 2020

Percent who watch online videos "every day"

All		Under 2		2 to 4		5 to 8	
2017	2020	2017	2020	2017	2020	2017	2020
24%[a]	34%[b]	8%[a]	17%[b]	27%[a]	39%[b]	30%[a]	39%[b]

Note: Items with different superscripts differ significantly (*p* < .05). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read within age groups.

Types of online videos watched. Learning videos are the most often watched, with 53% of 0- to 8-year-olds watching "often" or "sometimes" (Table 8). Thirty-four percent often or sometimes watch "how-to" videos about various activities they are interested in, such as how to draw, cook, dance, skateboard, make crafts, or build Legos. A similar percent (31%) often or sometimes watch "unboxing" or "product demonstration" videos (i.e., video of someone opening or playing with a new toy). One in 4 (25%) often or sometimes watch videos about playing video games, and 1 in 5 (23%) often or sometimes watch "challenge" videos, in which someone poses a challenge to other viewers to perform a dance or stunt. Watching learning and nursery rhyme videos peaks during the 2- to 4-year-old age range (with 70% and 66%, respectively, watching them "often" or "sometimes"). How-to videos peak among 5- to 8-year-olds, with 51% watching "often" or "sometimes"; other videos that peak in this age group include videos about playing video games (46%), unboxing or demonstrating toys (43%), and challenges or stunts (41%).

Influencers. Overall, 18% of all 0- to 8-year-olds follow or subscribe to certain YouTube personalities, celebrities, or influencers, ranging from 4% of children under 2, to 16% of 2- to 4-year-olds, and 27% of all 5- to 8-year-olds (see Table 8).

TABLE 8. Online Videos Watched, by Type and Age, 2020

Among 0- to 8-year-olds, percent who …	All	Under 2	2 to 4	5 to 8
Often/Sometimes watch:				
• Learning videos	53%	29%[a]	70%[b]	51%[c]
• Nursery rhymes or songs	45%	32%[a]	66%[b]	35%[a]
• Animal videos	43%	18%[a]	47%[b]	51%[b]
• How-to videos	34%	4%[a]	29%[b]	51%[c]
• Unboxing/product demonstration videos	31%	4%[a]	32%[b]	43%[c]
• Video-gaming/gameplay videos	25%	2%[a]	11%[b]	46%[c]
• Challenge/stunt videos	23%	1%[a]	12%[b]	41%[c]
Follow YouTube influencers	**18%**	**4%[a]**	**16%[b]**	**27%[c]**

Note: Items with different superscripts differ significantly (*p* < .05). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (between age groups).

Selecting online videos. When parents whose children watch online videos (81%) are asked how their child usually finds the videos they watch, 30% say that they or another adult usually choose them for the child (see Table 9). Eighteen percent say the child searches them out on their own, 16% say siblings' choices influence what the child watches, and 14% say the child's videos are most often chosen by the online platform, through autoplay or suggested videos. Not surprisingly, this varies a lot by the child's age, with more than half (57%) of parents of children under 2 saying they usually select videos for the child, compared to just 19% of parents of children age 5 to 8.

Exposure to online advertising. Most parents whose children watch online videos say their children don't see many inappropriate advertisements while watching (such as ads that are too sexual or violent or are for adult products or behaviors, such as alcohol or vaping). More than 8 in 10 (81%) say this "hardly ever" or "never" happens; 18% say it happens "often" or "sometimes," ranging from 10% for those with children under 2, to 24% of those with 5- to 8-year-olds (see Table 10).

Parental coviewing of online videos. Many times, of course, parents may not know exactly what their child is seeing, either the videos themselves or any advertising associated with them. About 1 in 4 parents (27%) say they watch online videos with their children most of the time, but that ranges from 61% for babies and toddlers under 2, to 18% of 5- to 8-year-olds (see Table 9).

TABLE 10. Inappropriate Advertising Exposure, by Age, 2020
Among 0- to 8-year-olds who watch online videos, percent who are exposed to inappropriate ads

	All	Under 2	2 to 4	5 to 8
Often/Sometimes	18%	10%[a]	12%[a]	24%[b]
Hardly ever/Never	81%	90%[a]	88%[a]	75%[b]

TABLE 9. Choosing and Coviewing Online Videos, 2020

Among 0- to 8-year-olds who watch online videos, percent who ...	All	Under 2	2 to 4	5 to 8
Choose online videos mainly by ...				
• Parent/other adult	30%	57%[a]	38%[b]	19%[c]
• Searching for them	18%	2%[a]	10%[b]	26%[c]
• Siblings who watch them	16%	18%	14%	16%
• Autoplay/suggested by platform	14%	7%[a]	19%[b]	13%[a]
• Following channels or individuals	10%	2%[a]	7%[a]	15%[b]
• Friend's recommendation	1%	★	★	2%
Coview with a parent				
• Most of the time	27%	61%[a]	28%[b]	18%[c]
• Some of the time	47%	24%[a]	48%[b]	52%[b]
• Hardly ever/Never	26%	13%[a]	24%[b]	31%[c]

*Greater than zero but less than one-half percent.

TABLES 9 AND 10:

Note: Items with different superscripts differ significantly (*p* < .05). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (between age groups).

MOBILE MEDIA DEVICES CONTINUE to be nearly universally accessible in young children's homes, with 97% having at least one smartphone and 75% having a tablet (see Table C on page 15). In fact, nearly half (48%) of all children have their own mobile device. Interestingly, there has been almost no change in personal device ownership among children from 2017 to 2020 (45% in 2017, and 48% in 2020). About half (46%) of all 2- to 4-year-olds have their own mobile device, as do more than two-thirds (67%) of 5- to 8-year-olds (see Table 11).

The proportion of children who have used mobile media ranges from 40% of babies and toddlers (under 2) up to nearly all (96%) 5- to 8-year-olds (see Table 12). Watching online videos is the most common activity on mobile devices (72% of all 0- to 8-year-olds do that), followed by playing video games (65%) and watching TV shows or movies (64%). Comparatively fewer children use mobile devices for reading books (33%); however, nearly half (47%) of older children (5 to 8 years old) have done so.

On average, 0- to 8-year-olds spend just under an hour a day (:55) using mobile devices, only a small increase of seven minutes a day over the past three years (not statistically significant; see Table 13). The most mobile time is spent watching TV shows and videos (:28 a day), followed by mobile gaming (:13). Mobile media

TABLE 11. Child's Own Media Devices, by Age, 2020
0- to 8-year-olds with their own …

	All	<2	2 to 4	5 to 8
Tablet	44%	8%[a]	43%[b]	61%[c]
Smartphone	8%	4%[a]	5%[a]	12%[b]
iPod Touch or similar	4%	4%[a]	5%[a]	12%[b]
Any mobile device	**48%**	**9%[a]**	**46%[b]**	**67%[c]**

TABLE 12. Use of Mobile Media, by Activity, 2020
0- to 8-year-olds who have used mobile media to …

	All	<2	2 to 4	5 to 8
Watch online videos	72%	30%[a]	78%[b]	87%[c]
Play games	65%	12%[a]	65%[b]	90%[c]
Watch television/movies	64%	26%[a]	73%[b]	76%[b]
Use apps	55%	10%[a]	52%[b]	78%[c]
Read books	33%	7%[a]	31%[b]	47%[c]
Any mobile use	**83%**	**40%[a]**	**93%[b]**	**96%[c]**

TABLES 11 AND 12:

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (between age groups).

TABLE 13. Time Spent with Mobile Media, 2011 to 2020
Among 0- to 8-year-olds, average daily time spent using a mobile device to …

	2011	2013	2017	2020
Watch television/videos	:01[a]	:05[b]	:21[c]	:28[d]
Play mobile games	:03[a]	:08[b]	:16[c]	:13[c]
Video-chat	N/A	N/A	:01	:01
Read	N/A	N/A	:03	:04
Do homework on a tablet	N/A	N/A	N/A	:01
Anything else	:01[a]	:02[b]	:07[c]	:08[c]
Total mobile media	**:05[a]**	**:15[b]**	**:48[c]**	**:55[c]**

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).

use ranges from an average of seven minutes a day for children under age 2, up to an hour and a quarter a day (1:15) on average among 5- to 8-year-olds (see Table 14). Among 0- to 8-year-olds, more than 1 in 5 "often" or "sometimes" use a mobile device when dining out at a restaurant (21%) or when eating at home (22%) (see Table 15).

As mentioned previously, there are substantial differences in children's use of mobile media by both race and income (see Table 16). Black children average about an hour (1:07) more per day on mobile devices than White children do, and Hispanic/Latinx children average 42 minutes more per day than White children do (1:44 for Black, 1:19 for Hispanic/Latinx, and :37 for White children). Differences among children by family income are similar (1:43 for lower-income, :59 for middle-income, and :40 for higher-income households).

TABLE 14. Time Spent with Mobile Media, by Age, 2020

Average daily time spent using a mobile device to …

	<2	2 to 4	5 to 8
Watch television/videos	:03[a]	:37[b]	:33[b]
Play mobile games	:01[a]	:10[b]	:21[c]
Video-chat	★	:01	:01
Read	:02	:05	:05
Do homework on a tablet	★[a]	★[a]	:03[b]
Anything else	:01[a]	:06[b]	:12[c]
Total mobile media	**:07[a]**	**:59[b]**	**1:15[b]**

*Greater than zero but less than one-half percent.

TABLE 15. Use of Mobile Devices During Meals, 2020

0- to 8-year-olds who often or sometimes use a mobile device during meals

	All	<2	2 to 4	5 to 8
At home	22%	6%[a]	24%[b]	27%[b]
At a restaurant	21%	7%[a]	27%[b]	23%[b]

TABLES 14 AND 15:

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (between age groups).

TABLE 16. Time Spent with Mobile Media, by Race/Ethnicity and Income, 2020

Among 0- to 8-year-olds, average daily time spent using a mobile device to …	Race/Ethnicity			Income		
	Black	**Hispanic/ Latinx**	**White**	**Lower**	**Middle**	**Higher**
Watch television/videos	:47[a]	:41[a]	:19[b]	:50[a]	:28[b]	:22[b]
Play mobile games	:20[a]	:19[b]	:10[b]	:19[a]	:16[a]	:10[b]
Video-chat	:02	:01	★	:02	:01	★
Read	:15[a]	:05[b]	:03[b]	:10[a]	:04[b]	:03[b]
Do homework on a tablet	:03	:01	:01	:03	:01	:01
Anything else	:17	:12[a]	:04[b]	:19[a]	:09[b]	:04[c]
Total mobile media	**1:44[a]**	**1:19[a]**	**:37[b]**	**1:43[a]**	**:59[b]**	**:40[c]**

*Less than one minute but greater than zero.

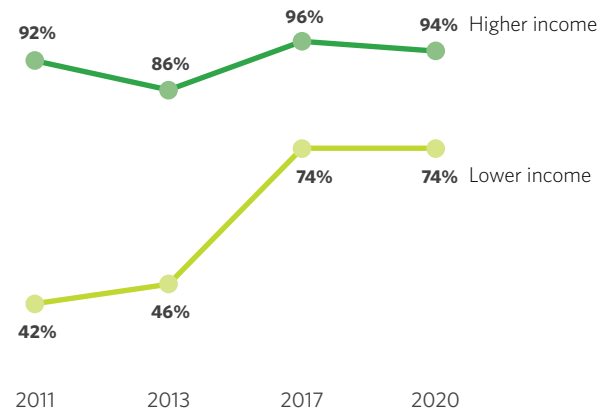Notes: *Lower income* is less than $30,000 a year; *middle income* is $30,000 to $75,000 a year; and *higher income* is more than $75,000 a year. Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows within race/ethnicity, and separately within income.

CHILDREN IN LOWER-INCOME HOMES continue to have far less access than other children to computers and internet at home, with virtually no progress made in stemming this digital divide over the past three years. The closing of most schools in the United States in March 2020 due to the coronavirus pandemic put the importance of this divide in sharp relief. Access to internet in the home has been stuck at the same level—with a quarter of lower-income families lacking it—since 2017 (see Figure 7). And more than a third (37%) of children in lower-income households lack access to a home computer (see Figure 8). Sixty-three percent of children in lower-income homes have a computer at home, compared to 95% of children in higher-income homes. At a time when remote learning has become essential, this failure to stem the divide could be devastating. There also continues to be a substantial divide in access to tablets in the home: In lower-income households, 59% of children have a tablet, compared to 83% of children in higher-income homes (see Table 17 on page 28). On the other hand, access to smartphones has continued to increase, to the point where 95% of children in lower-income families have one today (up from 89% in 2017; see Table 18 on page 28).

FIGURE 7. Home Internet Access, by Income, 2011 to 2020
0- to 8-year-olds with access to internet at home

FIGURE 8. Home Computer Access, by Income, 2011 to 2020
0- to 8-year-olds with a laptop or desktop computer at home
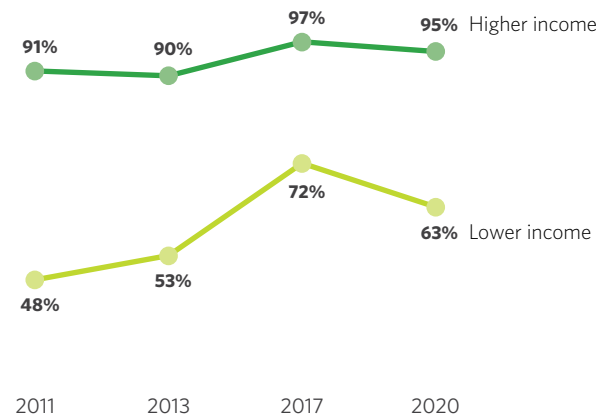
FIGURES 7 AND 8:

Note: *Lower income* is less than $30,000 a year; *higher income* is more than $75,000 a year.

Note: *Lower income* is less than $30,000 a year; *higher income* is more than $75,000 a year.

TABLE 17. Computer and Internet Access in the Home, by Income, 2020

Among 0- to 8-year-olds, percent who have each item in their home	All	Income		
		Lower	Middle	Higher
• Computer	88%	63%[a]	85%[b]	95%[c]
• Internet access	89%	74%[a]	85%[b]	94%[c]
• Smartphone	97%	95%[a]	96%[a]	99%[b]
• Tablet	75%	59%[a]	67%[a]	83%[b]

Notes: For purposes of this survey, internet access is defined as anything other than dial-up or a data-only plan. *Lower income* is less than $30,000 a year; *middle income* is $30,000 to $75,000 a year; and *higher income* is more than $75,000 a year. Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (by income).

TABLE 18. Digital Access Among Lower-Income Families, 2011 to 2020

Among 0- to 8-year-olds in lower-income families, percent whose family has each of the following at home

	2011	2013	2017	2020
• Computer	48%[a]	53%[ac]	72%[b]	63%[bc]
• Internet access	42%[a]	46%[a]	74%[b]	74%[b]
• Any mobile device in home	34%[a]	61%[b]	96%[c]	97%[c]
• *Smartphone*	27%[a]	51%[b]	89%[c]	95%[d]
• *Tablet*	2%[a]	20%[b]	61%[c]	59%[c]

Notes: *Lower-income* families are defined as families with an annual household income of less than $30,000. Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).

A MAJORITY OF CHILDREN read or are read to every day (59%), a figure that has remained steady since this tracking survey began in 2011 (see Table D on page 16). Likewise, the amount of time children spend reading has also remained fairly steady over that time period, at about a half hour a day (see Table 19). And children's reading has continued to take place almost entirely with print materials, rather than e-books. However, this year there have been some interesting changes among various demographic subgroups, as discussed below.

Time spent reading. From 2011 through 2017, the average amount of time 0- to 8-year-olds spent reading or being read to remained remarkably steady, ranging from 28 minutes to the current level of 32 minutes a day (of which e-reading now accounts for an average of four minutes a day) (see Table 19). While the overall increase from 2017 to 2020 is modest, there are some noteworthy changes among specific subpopulations, including children from Black and lower-income families. Reading is up by an average of 20 minutes a day among Black children (from :28 to :48), and by 17 minutes a day among children in lower-income families (from :26 to :43) (see Table 20). The increases are interesting because Black children and children in lower-income families are the only ones doing a substantial amount of daily reading on electronic devices (15 minutes a day among Black children, and 10 minutes a day among children in lower-income families; this compares to three minutes a day among White children, and three minutes a day among children in higher-income households).

TABLE 19. Time Spent Reading or Being Read to, 2011 to 2020

Among 0- to 8-year-olds, average time spent reading per day

	2011	2013	2017	2020
Total reading (or being read to)	:29[a]	:28	:29	:32[b]
• Print	:29	:28	:26	:28
• E-reading	N/A	N/A	:03	:04

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (over time).

TABLE 20. Time Spent Reading Per Day, by Demographic Group, 2017 vs. 2020

Average time spent reading per day among 0- to 8-year-olds		2017			2020		
		Print	**E-reading**	**Total**	**Print**	**E-reading**	**Total**
Race/Ethnicity	• Black	:20	:08	**:28**	:33*	:15	**:48***
	• White	:28	:02	**:30**	:29	:03	**:32**
	• Hispanic/Latinx	:21	:04	**:25**	:25	:05	**:30**
Income	• Lower (<$30,000)	:21	:05	**:26**	:33*	:10	**:43***
	• Middle ($30,000 to $75,000)	:22	:03	**:25**	:25	:04	**:29**
	• Higher (>$75,000)	:30	:03	**:33**	:29	:03	**:32**
Parent education	• High school or less	:19	:03	**:22**	:24	:05	**:29**
	• Some college	:29	:05	**:34**	:27	:05	**:32**
	• College degree	:30	:03	**:33**	:32	:04	**:36**

*Indicates that 2020 mean is significantly different from 2017 mean.

Daily reading. As mentioned above, 59% of all 0- to 8-year-olds read or are read to on a daily basis, a figure that hasn't changed significantly since this tracking survey began in 2011. However, daily reading among children from lower-income households has increased from 40% in 2017 to 50% in 2020. Despite this increase, there are still significant differences in rates of daily reading based on family income, race/ethnicity, and parent education. For example, while 50% of children in lower-income households read or are read to on a daily basis, 65% of their peers from higher-income homes read that often (see Table 21).

Demographic differences. There are no significant differences in time spent reading by age. However, girls read or are read to an average of six minutes more than boys (see Table 22). There are more substantial differences by race/ethnicity and income, with Black children and children from lower-income families reading or being read to more than others their age. Black children average 48 minutes a day reading, compared to 30 minutes a day among Hispanic/Latinx children, and 32 minutes a day among White children. Children in lower-income families average 43 minutes a day reading, compared to 32 minutes a day among children in higher-income families. This is a sharp contrast to findings in previous years: In 2017, for example, there were no differences in time spent reading by race or ethnicity, and the difference by income was in the opposite direction, with children in higher-income households reading more than others.

TABLE 21. Daily Reading, by Demographic, 2017 vs. 2020
0- to 8-year-olds who read/are read to every day

		2017	2020
All		**57%**	**59%**
Age	• Under 2	43%	46%[a]
	• 2 to 4	56%	63%[b]
	• 5 to 8	64%	63%[b]
Gender	• Boys	53%	57%
	• Girls	61%	62%
Race/Ethnicity	• Black	41%*	53%[a]
	• Hispanic/Latinx	42%	49%[b]
	• White	65%	64%[a]
Income	• Lower	40%*	50%[a]
	• Middle	54%	53%[a]
	• Higher	65%	65%[b]
Parent education	• High school or less	44%	50%[a]
	• Some college	60%	59%[b]
	• College degree	67%	67%[c]

*Indicates that 2017 and 2020 means differ significantly.

Note: Superscripts a, b, and c indicate differences between demographic groups in 2020 and should be read vertically, within each category. Items with different superscripts differ significantly (*p* < .05); those with no superscripts, or those with the same superscript, do not differ significantly.

TABLE 22. Time Spent Reading Daily, by Demographic, 2020
Average time spent reading per day among 0- to 8-year-olds

Age	• Under 2	:28
	• 2 to 4	:33
	• 5 to 8	:34
Gender	• Boys	:30[a]
	• Girls	:36[b]
Race/Ethnicity	• Black	:48[a]
	• Hispanic/Latinx	:30[b]
	• White	:32[b]
Income	• Lower	:43[a]
	• Middle	:29[b]
	• Higher	:32[b]
Parent education	• High school or less	:29
	• Some college	:32
	• College degree	:36

Note: Items with different superscripts differ significantly (*p* < .05). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read vertically, within each demographic category.

TABLES 21 AND 22:

Notes: *Lower income* is less than $30,000 a year; *middle income* is $30,000 to $75,000 a year; and *higher income* is more than $75,000 a year.

THE AMOUNT OF TIME children age 8 and younger spend playing video games has remained quite steady, on average, since these surveys began nine years ago—less than a half hour a day (see Table 23). The platforms on which children play have shifted, with less time spent on consoles or computers and more time on mobile devices, but the average time devoted to gaming and the demographics of which kids game the most have not. Unlike watching videos, gaming is inherently interactive, and requires a degree of agency from the child; this means that there is almost no gaming in the under 2 age group, and the vast majority of game time is concentrated in the 5- to 8-year-old age group (see Table 24), boys in particular (see Table 25 on page 32). One thing that has changed is that gaming is becoming "social," meaning that children are increasingly playing with other kids online.

Gaming. On average, children younger than 8 spend 23 minutes a day playing video games, an amount that has remained relatively steady over the past nine years. Over time, computer gaming and console gaming have dropped, and mobile gaming (on a smartphone or tablet) has increased. For example, in 2011, average gaming time was 25 minutes a day, and today it's 23 minutes a day. But in 2011, children spent 14 minutes with console games and three with mobile games; today they spend seven minutes with console games and 13 with mobile games. The platforms and devices have changed, but the activity or the overall time devoted to it have not (see Table 23).

Some of this shift to mobile gaming is likely due to the increasing availability of mobile devices over time (from 52% to 98% of children's homes; see Table C on page 15). But given that the proportion of homes with a video game console has remained steady over the past decade (at 67%, as shown in Table C)—while time spent playing on those devices has gone down—some part of the shift is also likely due to a decreased interest in that form of gaming among this age group (at least, a decreased interest in the games that are available to them).

Gaming varies a lot by age, given children's developing manual and cognitive skills. The youngest ones (under 2) average one minute a day, while 2- to 4-year-olds average 15 minutes a day, and 5- to 8-year-olds spend 40 minutes a day gaming (see Table 24).

TABLE 23. Time Spent Gaming Per Day, 2011 to 2020

Among 0- to 8-year-olds, average time spent playing each type of video game per day

	2011	2013	2017	2020
Console games	:14[a]	:10[ac]	:06[b]	:07[bc]
Computer games	:08[a]	:05[b]	:03[c]	:03[c]
Mobile games	:03[a]	:08[b]	:16[c]	:13[c]
Total gaming	**:25**	**:23**	**:25**	**:23**

Note: Items with different superscripts differ significantly ($p < .05$). Those with no superscript, or that share a common superscript, do not differ. Significance should be read across rows (over time).

TABLE 24. Time Spent Gaming Per Day, by Age, 2020

Among 0- to 8-year-olds, average time spent playing each type of video game per day

	Under 2	2 to 4	5 to 8
Console games	:00[a]	:04[b]	:14[c]
Computer games	★[a]	:01[a]	:05[b]
Mobile games	:01[a]	:10[b]	:21[c]
Total gaming	**:01[a]**	**:15[b]**	**:40[c]**

*Less than one minute but greater than zero.

Note: Items with different superscripts differ significantly ($p < .05$). Those with no superscript, or that share a common superscript, do not differ. Significance should be read across rows (by age).

The gender gap in gaming starts incredibly young, with boys averaging more than twice the time gaming as girls (:31 vs. :14 minutes a day, on average; see Table 25). We can't tell from this survey *why* that is, although some possible explanations are that girls somehow innately don't enjoy gaming as much as boys, parents encourage it differently by gender (e.g., fathers may play more than mothers, and may play with their sons more than with their daughters), or that content creators simply don't create as much content that appeals to girls.

In addition to the variations by age and gender, there are large differences in gaming by race/ethnicity, income, and parent education (see Table 25). Children who are White, from higher-income homes, or have parents with a college degree spend far less time playing video games than other children their age. For example, White children average about half as much time gaming as Black children do (:18 vs. :37 a day, with Hispanic/Latinx children in between at :30).

Social gaming and social media. While very few children in the 8-and-under age group use what we typically think of as "social media" (e.g., Instagram, Snapchat), they are starting to interact with others online, through connected (or "social") gaming. As gaming moves increasingly online, more of children's gaming is connected, even among this young age group. Overall, nearly a third (32%) of 5- to 8-year-olds "often" or "sometimes" engage in social gaming (playing with other kids online; see Figure 9). This compares to 21% who did so three years ago. Nongaming social media use remains infrequent among children 8 or younger. Only 6% of 5- to 8-year-olds use sites such as Snapchat or TikTok "often" or "sometimes." This has remained virtually unchanged since 2017, when the rate was 5% for this age group.

FIGURE 9. Frequency of Social Gaming, by Age, 2020
Among 0- to 8-year-olds, percent who "often" or "sometimes" play social games with other kids online

	Under 2	2 to 4	5 to 8
	2%	5%	32%
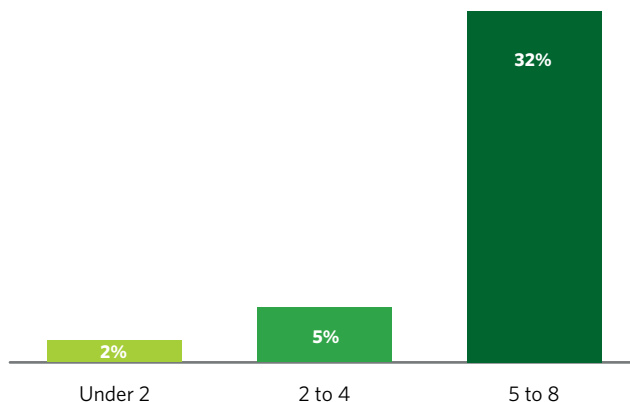
TABLE 25. Time Spent Gaming Per Day, by Demographic Group, 2020
Among 0- to 8-year-olds, average time spent playing each type of video game per day

		Console gaming	Computer gaming	Mobile gaming	Total gaming
Gender	• Boys	:13[a]	:03	:15[a]	**:31[a]**
	• Girls	:02[b]	:01	:11[b]	**:14[b]**
Race/Ethnicity	• Black	:12[a]	:05	:20[a]	**:37[a]**
	• Hispanic/Latinx	:10	:01	:19[a]	**:30[a]**
	• White	:06[b]	:02	:10[b]	**:18[b]**
Income	• Lower	:09	:01	:19[a]	**:29[a]**
	• Middle	:10[a]	:01	:16[a]	**:27[a]**
	• Higher	:06[b]	:03	:10[b]	**:19[b]**
Parent education	• High school or less	:11[a]	:03	:20[a]	**:34[a]**
	• Some college	:08	:03	:13[b]	**:24[a]**
	• College degree	:04[b]	:02	:08[c]	**:14[b]**

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read vertically, within each demographic category.

BABIES AND TODDLERS YOUNGER than 2 spend an average of 49 minutes a day using screen media, and this is almost entirely devoted to watching TV shows, DVDs, and online videos (see Table 26). While the average daily screen time among this age group is 49 minutes, there is substantial variation. In any given day, 56% of children under 2 do not use any screen media, while

TABLE 26. Time Spent Using Media Among Children Under 2, 2011 to 2020

Among all children under 2, average time spent per day …	2011	2013	2017	2020
Watching television/videos	**:53**	**:56**	**:40**	**:45**
• Television	:37[a]	:37[ab]	:21[b]	:18[c]
• *As aired*	*N/A*	*:28*	*:19*	*:16*
• *Recorded/on demand*	*N/A*	*:09*	*:02*	*:02*
• Online/subscription	★[a]	:08[b]	:13[b]	:17[b]
• *Streaming/subscription service*	*N/A*	*N/A*	*:09*	*:13*
• *Online videos (YouTube/social/other)*	*N/A*	*N/A*	*:04*	*:04*
• DVDs	:16[a]	:11	:06[b]	:10
Reading/being read to	**:23**	**:19[a]**	**:21**	**:28**
• Print	:23	:19	:20	:26
• Electronic	N/A	N/A	:01	:02
Playing video games	**★**	**:01**	**★**	**:01**
• Console games	★	★	★	:00
• Computer games	★	★	★	★
• Mobile games	★	:01	★	:01
Listening to audio	**:39[a]**	**:34**	**:23[b]**	**:35**
• Music	:39[a]	:34	:23[b]	:34
• Podcasts/stories/audiobooks	N/A	N/A	N/A	:01
Other digital activities	**★[a]**	**:01**	**★**	**:01[b]**
• Video-chatting	N/A	N/A	★	★
• Homework/Educational software	★	:01	★	★
• Virtual reality	N/A	N/A	★	:00
• Other[†]	★[a]	★	★	:01[b]
Total mobile media[‡]	**★[a]**	**:02[b]**	**:07[b]**	**:07[b]**
Total screen media	**:53**	**:58**	**:42**	**:49**
Total media	**1:55[a]**	**1:51[ab]**	**1:25[b]**	**1:50**

*Less than one minute but greater than zero.   [†]Such as taking or looking at photos or videos, looking things up, social networking, or using other types of activities or apps not already covered.   [‡]Includes time spent doing any of the above activities on a smartphone, tablet, iPod Touch, or e-reader.

Note: Items with different superscripts differ significantly ($p < .05$). Those with no superscript, or that share a common superscript, do not differ significantly. Significance should be read across rows (over time).

44% do. One-third (33%) watch for less than two hours, and 11% watch for more than two hours (see Figure 10). Among those who do use screens in a given day, the average time spent doing so is just under two hours (1:54; see Table 27).

While many organizations recommend against screen use before age 2, 70% of children that age have watched television or videos, including 45% who have watched online videos (see Table 28). Four in 10 (40%) have used mobile media devices, primarily for watching online videos (30%) or TV shows or movies (26%) (see Table 29). The proportion of children under 2 who are daily viewers of TV or video content has remained remarkably stable over the past decade (currently 34%). The main changes have been in how the children access their video content, with a drop from 16% who were daily watchers of DVDs and videotapes down to 7% in 2017 (this question wasn't asked in 2020), and

FIGURE 10. Screen Use Among Children Under 2, 2020

Percent who use screen media for …

- ■ >4 hours
- ■ 2 to 4 hours
- ■ 1 to 2 hours
- ■ <1 hour
- ■ None
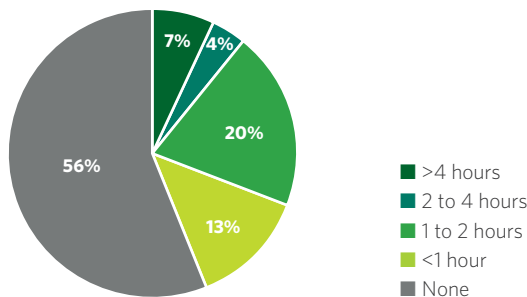
TABLE 27. Time Spent Using Screen Media Among Children Under 2 Who Used Screen Media the Previous Day, 2020

Average time spent …

Watching television/videos	**1:40**
• Television	:33
• *As aired*	*:08*
• *Recorded/on demand*	*:25*
• Online/subscription	:45
• *Streaming/subscription service*	*:34*
• *Online videos (YouTube/social/other)*	*:11*
• DVDs	:22
Reading/being read to	**:05**
• Electronic	:05
Playing video games	**:03**
• Console games	:00
• Computer games	★
• Mobile games	:03
Other digital activities	**:06**
• Video-chatting	:01
• Homework/Educational software	★
• Virtual reality	:00
• Other	:05
Total screen media	**1:54**

*Less than one minute but greater than zero.

TABLE 28. Frequency of Media Activities Among Children Under 2, 2020

Percent who …	Daily	Weekly	Less than weekly[†]	Total ever do
Read/are read to	46%	27%	4%	**77%**
Watch television	29%	26%	11%	**66%**
Watch online videos	17%	16%	12%	**45%**

[†] Does not include those who never do the activity.

TABLE 29. Use of Mobile Media by Children Under 2, by Activity, 2020

Percent who have used mobile media to …

Watch online videos	30%
Watch television/movies	26%
Play games	12%
Use apps	10%
Read books	7%
Any mobile use	**40%**

an increase in daily viewers of online videos from 8% in 2017 (the first time the item was asked) up to 17% in early 2020 (see Table 30).

Nonscreen media use is also common among this age group. Just less than half (46%) read or are read to every day, a rate that has remained relatively steady over the past decade (see Table 30). Children under 2 average about half an hour a day reading or being read to (:28) and listening to music (:34) (see Table 26 on page 33).

Why children under 2 use screen media. The most common reason parents give for their children under age 2 using screen media is that the child learns things from the media they watch (70% say this is a "very" or "somewhat" important reason). Half of parents say other important reasons are that it is fun for the child (54%) and that the parent needs the time to get things done at home (52%; see Table 31). The vast majority of parents whose children this age use screen media (75%) say their child uses "the right" amount of screen media, with 16% saying their child spends "too much time" with screens and 8% "too little time" (see Table 37 on page 40). Less than 1 in 5 (18%) say it is difficult to get their child under 2 to stop using screens when they tell them to, while 80% say it is not difficult (see Table 38 on page 40).

Educational media. Parents whose babies or toddlers use screen media have highly favorable opinions about the impact of media on their child's learning, with 70% saying media use mostly helps learning and just 8% saying it mostly hurts (see Table 32). The vast majority (76%) agree either "strongly" or "somewhat" that they are satisfied with the amount and quality of educational screen media available to them (see Table 36 on page 40). Some parents confess to being a bit overwhelmed by all the media choices they have—37% strongly or somewhat agree that they are overwhelmed by the variety of media options available for their child—but most (60%) don't feel that way.

TABLE 30. Daily Media Use by Children Under 2, 2011 to 2020

Percent who … daily	2011	2013	2017	2020
Read/are read to	**44%**	**48%**	**43%**	**46%**
Watch television/videos	**40%**	**32%**	**35%**	**34%**
• Watch television	37%	31%	34%	29%
• Watch online videos	N/A	N/A	8%[a]	17%[b]
• Watch DVDs/ videotapes	16%[a]	11%	7%[b]	N/A

Note: Items with different superscripts differ significantly ($p < .05$). Those with no superscript, or that share a common superscript, do not differ significantly. Significance should be read across rows (over time).

TABLE 31. Reasons for Screen Use by Children Under 2, 2020
Among parents of screen users, percent who say … is a "very/ somewhat important" reason their child uses screens

They learn things from it	70%
For fun	54%
[The parent needs] time at home to get things done	52%
To relax	39%
To keep them occupied when out	35%
Their friends/siblings are doing it	32%
To feel better when they're upset	27%
They're bored	21%

TABLE 32. Parents' Views of Media Effects, 2020
Among parents of children under 2 who use screen media, percent who say media helps/hurts the child's …

	Helps (a lot/a little)	Hurts (a lot/a little)
Learning	70%	8%
Creativity	40%	12%
Social skills	33%	15%
Ability to focus	37%	17%
Emotional maturity	23%	11%
Behavior	26%	17%
Physical activity	19%	27%

Note: Rows do not add up to 100% because those who responded "makes no difference" are omitted from table.

# EMERGING TECHNOLOGIES: VIRTUAL REALITY, SMART SPEAKERS, AND SMARTWATCHES

SOME OF THE NEWER technologies explored in this survey include smart speakers and virtual assistants (e.g., Amazon's Alexa or Apple's Siri), which allow children to interact verbally with online devices and virtual characters; virtual reality (VR) headsets, which create an all-immersive, three-dimensional gaming or movie experience; and child-oriented wearable devices, such as smartwatches, which allow parents to track their kids and enable the child to call pre-programmed phone numbers.

Smart speakers became widely available about five years ago. In 2017, 9% of children's homes had one of these voice-activated devices that can search the internet, play music, answer questions, and perform myriad other functions. Today 41% have one (see Figure 11). In 2017, 14% of children often or sometimes interacted with the virtual characters in smart speakers or mobile devices; today, 25% do, including 23% of 2- to 4-year-olds, and 36% of 5- to 8-year-olds (see Table 33). The most common reason children use smart speakers is to play music, which 19% of kids do (up from 6% in 2017). Only a very small percentage of children have used these devices to listen to stories (4%) or to help them go to sleep (3%).

The all-immersive VR headsets that have been sold on the market since 2016 have yet to make any major inroads in children's media lives. In 2017, 11% of children lived in a home with a VR headset, and three years later that percentage has not moved, at 11% (see Table C on page 15). On average, children spend less than a minute a day using VR (Table A on page 13). Smartwatches designed specifically for kids are beginning to come on the market in the United States, but to date only 5% of 0- to 8-year-olds have one (see Table C on page 15).

FIGURE 11. Smart Speakers in the Home, 2017 vs. 2020
Among 0- to 8-year-olds, percent with a smart speaker in the home
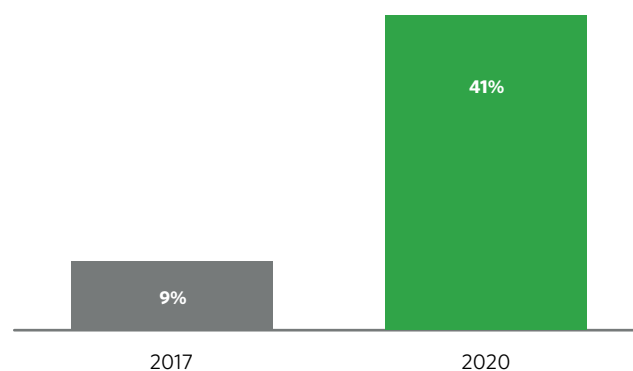
TABLE 33. Use of Smart Speakers and Virtual Assistants, by Age, 2020
Among 0- to 8-year-olds, percent who …

	All	<2	2 to 4	5 to 8
Often or sometimes interact with a smart speaker or virtual assistant	25%	4%[a]	23%[b]	36%[c]
Have used a smart speaker or virtual assistant to:				
• Play music	19%	2%[a]	19%[b]	27%[c]
• Talk/fool around with	16%	2%[a]	12%[b]	25%[c]
• Get information	14%	1%[a]	7%[b]	25%[c]
• Get jokes	9%	★[a]	4%[b]	17%[c]
• Search for videos	8%	★[a]	7%[b]	12%[c]
• Listen to stories	4%	1%[a]	3%[a]	6%[b]
• Go to sleep	3%	1%	3%	3%
• Something else	2%	0%[a]	3%[b]	2%[b]

*Greater than zero but less than one-half percent.

Note: Items with different superscripts differ significantly (*p* < .05). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (by age).

PARENTS' VIEWS ABOUT CHILDREN'S MEDIA

PARENTS OF 0- TO 8-year-olds have overwhelmingly positive views of the screen media their children use: The majority don't report being concerned about the amount of time their kids spend with screens, the impact screen media has on their child, the quality of the content available to them, or the challenges of getting their children to disengage with screens when it's time for other activities.

Parents' views of media effects. Among parents whose children use screen media, nearly three-quarters (72%) say the media their child uses help the child's learning, while only 8% say media use hurts learning (see Table 34). "Learning" is also a strong motivator for children's screen use: The most common reason parents give for their child's screen use is because "they learn things from it," with 78% citing this as a "very" (34%) or "some-what" (44%) important reason (see Table 35). The vast majority of parents say they are satisfied with the amount and quality of the educational media available to their children: Seventy-five percent either "strongly" (20%) or "somewhat" (55%) agree that they are satisfied (see Table 36 on page 40). Parents' satisfaction with educational media goes down a bit as kids get older: Among parents of 2- to 4-year-olds, 83% are satisfied and 16% dissatis-fied; among 5- to 8-year-olds, 68% are satisfied and 31% dissatisfied. Only 12% of parents strongly agree that they feel "overwhelmed" by the variety of content available to their kids these days (another 37% agree "somewhat").

A majority of parents (60%) also say media helps their child's creativity, compared to just 11% who say it hurts creativity (see Table 34). When it comes to children's social and emotional development, parents are less universally positive about media impact, but still more likely to think media has a positive than a negative effect. A plurality say the media their child uses makes no difference one way or the other to their child's social skills, emotional maturity, behavior, or ability to focus. More parents say media has a positive than a negative effect on social skills and

TABLE 34. Parents' Views of Media Effects, 2020
Among parents of 0- to 8-year-olds who use screen media, percent who say their child's media use helps/hurts the child's …

	Helps (a lot/a little)	Makes no difference	Hurts (a lot/a little)
Learning	72%	19%	8%
Creativity	60%	28%	11%
Social skills	34%	46%	19%
Ability to focus	32%	39%	28%
Emotional maturity	31%	52%	16%
Behavior	25%	46%	27%
Physical activity	16%	40%	43%

Note: Rows may not add up to 100% due to rounding.

TABLE 35. Reasons for Children's Screen Use, 2020
Among parents of 0- to 8-year-old screen users, percent who say … is a reason their child uses screen media

	Very important	Somewhat important
They learn things from it	34%	44%
For fun	20%	57%
[The parent needs] time at home to get things done	11%	41%
To relax	9%	44%
To keep them occupied when out	7%	29%
They're bored	7%	31%
Their friends/siblings are doing it	5%	24%
To feel better when they're upset	5%	24%

emotional maturity, but they are more evenly split about media effects on the child's behavior or ability to focus. For example, 34% say media use has a positive effect on their child's social skills, compared to 19% who say negative (46% say it makes no difference). With regard to the child's behavior, 25% of parents say media have a positive effect, 27% say negative, and 46% say no effect. The only aspect of children's media use that parents are clearly more negative than positive about is media impact on children's physical activity: Forty-three percent say it has a negative effect, compared to 16% who say positive.

Parents' views of the amount of time children spend with media. Six in 10 (60%) parents whose children use screen media say their child spends "the right amount of time" with screens, compared to 34% who say they spend "too much time" and 5% who say "too little time" (see Table 37). But parents' views do shift substantially as the child gets older, so that parents of 5- to 8-year-olds are more evenly split, with 50% saying their child has the right amount of screen time, and 44% saying it's too much (6% say too little). Most parents don't avail themselves of the types of products available for limiting a child's screen time: One in 5 (20%) parents say they use some type of device or app to limit their child's screen time, including 26% of those with 5- to 8-year-olds. Indeed, some parents use media as a way to keep their child occupied when the parent needs to get something done, either when out running errands (before the coronavirus pandemic, 36% said this was a "very" or "somewhat" important reason their child used screen media) or so the parent can get things done at home (52%) (see Table 35 on page 39). And most say they don't find it difficult to get their child to stop using media when they ask (60%, although 40% do find it at least somewhat difficult; see Table 38).

TABLE 36. Parent Satisfaction with the Amount and Quality of Educational Media, 2020

Among parents of 0- to 8-year-olds who use screen media, percent who agree/disagree that they are satisfied

	All	<2	2 to 4	5 to 8
Agree	**75%**	**76%**	**83%[a]**	**68%[b]**
• Strongly	20%	23%	23%[a]	16%[b]
• Somewhat	55%	53%	60%[a]	52%[b]
Disagree	**24%**	**22%**	**16%**	**31%**
• Somewhat	20%	17%[a]	13%[a]	26%[b]
• Strongly	4%	5%	3%	5%

TABLE 37. Parents' Views About Their Child's Screen Media Time, 2020

Among parents of 0- to 8-year-olds who use screen media, percent who …

	All	<2	2 to 4	5 to 8
Say their child spends too much/little time with screens				
• Too much time	34%	16%[a]	29%[b]	44%[c]
• Too little time	5%	8%	4%	6%
• Right amount of time	60%	75%[a]	66%[b]	50%[c]
Use a device or app to limit their child's screen time	**20%**	**10%[a]**	**15%[a]**	**26%[b]**

TABLE 38. Difficulty Getting Child to Stop Using Media, 2020

Among parents of 0- to 8-year-olds who use screen media, percent who agree/disagree that it is difficult to get the child to stop using media when asked

	All	<2	2 to 4	5 to 8
Agree	**40%**	**18%[a]**	**39%[b]**	**48%[b]**
• Strongly	9%	2%[a]	9%[b]	11%[b]
• Somewhat	31%	16%[a]	30%[b]	37%[b]
Disagree	**60%**	**80%[a]**	**60%[b]**	**52%[b]**
• Somewhat	25%	16%[a]	30%[b]	24%[b]
• Strongly	35%	64%[a]	30%[b]	28%[b]

TABLES 36 to 38:

Note: Items with different superscripts differ significantly (*p* < .05). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (by age).

Concerns about media. While most parents don't think their child spends too much time with media at this point in time, many do worry about their child's current and future media habits (see Table 39). When parents are asked how concerned they are about various aspects of their child's use of media in the future, 34% say they are "very" concerned about the child spending too much time with media. The amount of sexual and violent content in media, and the possibility of their child facing cyberbullying, are other topics that concern parents (42%, 36%, and 40%, respectively, are "very" concerned). Racial/ethnic or gender stereotypes in media are of concern to a smaller number of parents (23% and 21%, respectively, are "very" concerned).

Parental coviewing and coengagement with media. A majority of parents say they watch television, watch online videos, and play mobile games with their child at least "some of the time" (84% for television, 74% for online videos, and 63% for mobile games), although far fewer say they do so "most" of the time (see Table 40). Parental coengagement goes down dramatically as the child's age goes up: The proportion of parents who say they use media "most of the time" with their 5- to 8-year-old children ranges from 11% to 19%, depending on the media activity (this compares to 37% to 62% for parents of children under 2; see Table 41).

Racial/ethnic differences in parental attitudes and concerns. Black parents and those in lower-income households are much more likely than their higher-income or White counterparts to perceive educational benefits to their children from screen media (see Table 42 on page 42). Thirty-nine percent of Black parents versus 19% of White parents saying the media their child uses helps their learning "a lot," as do 38% of lower-income vs. 17% of higher-income parents. Indeed, half of Black parents say that learning is a "very important" reason their child uses screen media, compared to 31% of White parents. Black parents also have a more favorable opinion of the educational media available to their children. For example, these parents are more than twice as likely as White ones to "strongly agree" that they are satisfied with their child's educational media (33% vs. 15%).

TABLE 39. Parents' Concerns About Media, by Level, 2020

Among parents of 0- to 8-year-olds, percent who are concerned* about their child …	Very concerned	Very or somewhat concerned
Spending too much time with media	34%	75%
Sexual content in media	42%	73%
Violent content in media	36%	73%
Cyberbullying online	40%	70%
Media and tech companies collecting data about them	34%	69%
Amount of advertising and materialism in media	28%	68%
Depictions of drugs/alcohol in media	30%	62%
Vaping or smoking in media	27%	54%
Racial/ethnic stereotypes in media	23%	53%
Gender stereotypes in media	21%	49%

*Today or in the future

TABLE 40. Co-Use of Media, by Level, 2020

Among parents of 0- to 8-year-olds who use each type of screen media, percent who … with their child	Most of the time	Most or some of the time
Watch television	29%	84%
Watch online videos	27%	74%
Play games/use apps on mobile	17%	63%
Play video games	18%	62%

TABLE 41. Co-Use of Media, by Age, 2020

Among parents of 0- to 8-year-olds who use each type of screen media, percent who … with their child "most of the time"	<2	2 to 4	5 to 8
Watch television	53%[a]	31%[b]	19%[c]
Watch online videos	62%[a]	28%[b]	18%[c]
Play games/use apps on mobile	49%[a]	20%[b]	11%[c]
Play video games	37%[a]	36%[a]	13%[b]

Note: Items with different superscripts differ significantly (*p* < .05). Those that share a common superscript do not differ significantly. Significance should be read across rows (by age).

Hispanic/Latinx parents have the highest level of concern about the possible negative effects of media in their children's futures (see Table 43). On almost every issue of potential concern asked about in this survey—from images of sex and violence to cyberbullying and data collection—Hispanic/Latinx parents express the most concern, and White express parents the least, often by a wide margin. For example, 55% of Hispanic/Latinx parents say they are "very" concerned about their child's exposure to sexual content in the media (either today or in the future), compared to 40% of Black parents and 36% of White parents. The largest difference comes with regard to parents' concerns about racial and ethnic stereotypes in media, with just 15% of White parents saying they are "very" concerned, compared to 35% of Black parents and 37% of Hispanic/Latinx parents.

TABLE 42. Parents' Views About Media and Learning, by Race/Ethnicity and Income, 2020

Among parents of 0- to 8-year-olds who use screen media, percent who say …	Race/Ethnicity			Income		
	Black	**Hispanic/ Latinx**	**White**	**Lower**	**Middle**	**Higher**
Learning is a "very important" reason their child uses screen media	50%[a]	37%[b]	31%[b]	42%[a]	40%[a]	29%[b]
The media their child uses helps "a lot" with learning	39%[a]	32%[a]	19%[b]	38%[a]	31%[a]	17%[b]
"Strongly agree" that they are satisfied with amount and quality of educational media for their child	33%[a]	27%[a]	15%[b]	26%[a]	24%[a]	16%[b]

Notes: *Lower income* is less than $30,000 a year; *middle income* is $30,000 to $75,000 a year; and *higher income* is more than $75,000 a year. Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows within race/ethnicity, and separately within income.

TABLE 43. Parents' Concerns About Media, by Race/Ethnicity, 2020

Among parents of 0- to 8-year-olds, percent who are "very concerned"* about their child …	Race/Ethnicity		
	Black	**Hispanic/ Latinx**	**White**
Spending too much time with media	30%[a]	41%[b]	32%[a]
Sexual content in media	40%[a]	55%[b]	36%[a]
Violent content in media	38%[a]	50%[b]	29%[c]
Cyberbullying online	37%[a]	53%[b]	35%[a]
Media/tech companies collecting data about them	35%[a]	47%[a]	28%[b]
Amount of advertising and materialism in media	31%	36%[a]	24%[b]
Depictions of drugs/alcohol in media	32%[a]	41%[a]	23%[b]
Vaping or smoking in media	33%[a]	41%[a]	20%[b]
Racial/ethnic stereotypes in media	35%[a]	37%[a]	15%[b]
Gender stereotypes in media	28%[a]	30%[a]	15%[b]

*Today or in the future

Note: Items with different superscripts differ significantly ($p < .05$). Items with no superscript, or those with the same superscript, do not differ significantly. Significance should be read across rows (by race/ethnicity).

PARENT QUOTES

THE SURVEY INDICATES CLEAR patterns of parents' opinions about children and media, but it also reveals just how individualistic and unpredictable parents' opinions of and experiences with specific shows can be. The survey included an open-ended question asking parents to tell us about specific shows, videos, games, or websites that had either a positive or negative effect on their child's behavior, emotional maturity, ability to focus, or social skills. A sampling of their comments is presented below.

Behavior

Positive Effects

"Child-based meditation. He listens much better and can focus much better after a meditation video."

—Parent of a 6-year-old boy

"Most shows she watches on Netflix remind her to say 'please,' 'thank you,' and 'sorry.'"

—Parent of a 4-year-old girl

"Videos about eating healthy food and hygiene with bathing and washing her hands and brushing her teeth. It helps to understand why and reduces the difficulty of her doing these without crying."

—Parent of a 3-year-old girl

Negative Effects

"He saw a YouTube video of people stuffing marshmallows in their mouths, tried it at home, and nearly [choked]. (I had to call 911.)"

—Parent of an 8-year-old boy

"She gets addicted to Roblox, and it's hard to pull her away."

—Parent of a 7-year-old girl

"If we allow him to watch an hour of screen time, his behavior changes to somewhat violent, even if what he was watching was not violent at all. If we don't allow him to watch anything with a digital screen for a couple days, his mood goes back to normal."

—Parent of a 3-year-old boy

"[When she watches] Ryan's show, she always wants more toys and she never focuses on what she has, or even pays attention to what's going around her in the house. And she wants us to be always available like Ryan's parents to play with her all the time!!!"

—Parent of a 2-year-old girl

Ability to Focus

Positive Effects

"[Watching] SpongeBob calms him down. [My child] has ADHD."

—Parent of an 8-year-old boy

"*Super Why* on PBS helps him focus because he tries to look out for the mystery letter to solve the problem of the day."

—Parent of a 5-year-old boy

"*Sesame Street* teaches her many things that she has to focus on. She enjoys finding [the] hidden object or answering riddles given by the show's characters."

—Parent of a 3-year-old girl

"Sometimes when she is focused on watching [YouTube Kids on] the phone she will eat, relax, or let me get things done. Otherwise she is going a hundred miles a minute and just wants to play."

—Parent of a 2-year-old girl

"He is intrigued by Elmo and Cookie Monster. He focuses in on them which keeps his attention [so he] has the ability to learn new things."

—Parent of a 1-year-old boy

"Since his eyes are still maturing at 6 months old, baby stimulation videos are helpful and have soothing music along with them."

—Parent of a boy younger than 1 year

Negative Effects

"YouTube hurts her ability to focus because there are so many videos to choose from that oftentimes she will be distracted while watching a video and click on another video without finishing the first one."

—Parent of a 3-year-old girl

"*SpongeBob SquarePants* is too erratic/frenetic. It normalizes responding to rapid, intense stimuli."

—Parent of a 4-year-old boy

"He can't focus on anything when the TV is on other than the TV."

—Parent of a 4-year-old boy

"It is not necessarily a specific show, game, video or app that hurts, but rather the ability to focus on one specific thing. There is so much content to choose from, there is always a constant change of what she is viewing."

—Parent of a 4-year-old girl

"She sometimes will not respond when another person is talking to her while she is in front of a screen. Also, she wants to play video games or watch movies and doesn't know how to enjoy and focus on other hobbies."

—Parent of a 4-year-old girl

Emotional Maturity

Positive Effects

"Daniel Tiger helps him learn how to process different emotions and how to calm down when he is upset."

—Parent of a 1-year-old boy

"*Chip and Potato* is a video that helps him learn how to deal and cope with things like being strong when things don't go his way. Like being scared sleeping over at a friend's house for the first time and dealing with mean classmates."

—Parent of a 5-year-old boy

"*Películas amigos le ayuda a entender la importancia de [nombre].*"
("Movies with friendships help [him] understand how to be a friend.")

—Parent of a 6-year-old boy

Negative Effects

"Just in general, he tends to throw more tantrums after watching a screen."

—Parent of a 2-year-old boy

"YouTube videos where the parents are playing with their kids. The kids act up and the parents don't discipline them so [she] acts just as bad as other kids on YouTube."

—Parent of a 5-year-old girl

"Her behavior suffers if we allow her to watch more than two hours a day. So that is now a limit, and we only allow her to watch on weekends."

—Parent of a 7-year-old girl

"*Juegos de video alteran su comportamiento no sabe como lidiar la frustracion cuando pierde y se enoja y llora.*"
("Video games change his behavior. He doesn't know how to alleviate his frustration when he loses and he gets mad and cries.")

—Parent of an 8-year-old boy

"He cannot transition away from the TV without difficulty. Extra cranky. Moody. Rude."

—Parent of a 3-year-old boy

Social Skills

Positive Effects

"[Watching] SpongeBob helps him relate to others."

—Parent of a 6-year-old boy

"The YouTube channel Cocomelon uses real-life situations for kids and teaches them to share. I know it affects her because I see her resolve her own situations with sharing."

—Parent of a 2-year-old girl

"He copies the way he sees the people on TV act. So watching people like CoryxKenshin or Ryan's World toy reviews on YouTube helps build his personality and people skills. Whenever he meets new children, he puts himself out there very easily and he displays actions and [uses] different sayings he picked up from his video."

—Parent of a 3-year-old boy

"Our daughter is [an] only child. She watches YouTube videos of kids doing things. It entices her to want to do the same thing with other kids. I see this behavior when she interacts with new kids."

—Parent of a 2-year-old girl

"She watches some YouTube videos that show other kids in social situations and learns how to interact and communicate better with kids near to her age."

—Parent of a 6-year-old girl

Negative Effects

"Si se queda viendo videos no socializa con sus padres ni con familiares o amigos."
("If she stays watching videos, she won't socialize with her parents, her family, or friends.")

—Parent of an 8-year-old girl

"Too hooked to screen and not enough time spent with the family and people."

—Parent of a 5-year-old boy

Creativity

Positive Effects

"TikTok helps her be creative and outgoing without her worrying about what others think."

—Parent of an 8-year-old girl

"Minecraft helps him to be creative, solve problems, and remain calm."

—Parent of a 7-year-old boy

"Ryan's [World] toy videos help him use his imagination when other kids are playing with him."

—Parent of a 5-year-old boy

Negative Effects

"I think he is so used to having something entertain him that if he is bored he doesn't know what to do with himself. He bounces from one thing to the next."

—Parent of a 7-year-old boy

EVEN BEFORE THE CORONAVIRUS pandemic reached the United States, more and more aspects of children's lives revolved around media; the closing of schools and playgrounds and the limiting of social contact have served to highlight the centrality of media. This report describes families' media lives on the brink of the pandemic, and raises a number of important issues that, based on the state of play in early 2020, will be critical for researchers to track and monitor. We enumerate some of those issues and questions below:

Education

- As of mid-March 2020, more than a third of children from lower-income families lacked a computer in the home, and more than a quarter lacked internet access. No progress had been made in addressing either aspect of the digital divide over the past few years. Yet by the end of that month, online learning became the only option for most children, and the price of our lack of progress in addressing this divide became painfully clear.

- Before the coronavirus pandemic forced most schools online, the school-age children in the survey (5- to 8-year-olds) were not spending much time using digital devices for homework, averaging just five minutes a day doing schoolwork. As online learning became the only option during stay-at-home orders, most younger children didn't have much experience in that realm. Will their facility with digital devices for entertainment purposes translate to Zoom classes and online homework?

- Over the years, parents have been largely satisfied with the amount and quality of educational media available for their children, including in early 2020. Will that satisfaction be challenged by the new pressures for children to learn from home, or will parental satisfaction grow as parents are forced, by necessity, to discover new educational content options across platforms?

Time Spent with Screen Media

- Some child development professionals have concerns about the amount of time children spend with screens, while other experts think that time is not a relevant metric. Among the 0- to 8-year-old age group, the total amount of time devoted to screen use each day has remained relatively stable over the past decade. Will that finally change now that the coronavirus pandemic has forced so many indoors, and if so, to what degree? If screen use has grown during this period, how will that affect children's healthy development and future relationship with screens? Will any changes that occur be temporary or lasting?

- Even prior to the pandemic, the disparity in screen use by parent education, income, and race/ethnicity had already exploded, nearly tripling from a difference of 40 minutes a day by income in 2011 to just under two hours a day (1:56) in 2020. At the same time, Black parents are much more likely to see educational value in screen media, as are parents in lower-income homes. Is that a primary driver of growing socioeconomic differences in media usage, and if so, how can the stakeholders in children's lives capitalize on this to support families of color as well as lower-income families? Will these gaps continue to grow during and after the pandemic, and if so, what are the long-term implications for child development?

Screen Use Among Children Under 2

- Before the pandemic upended our lives, on any given day in this country most babies under age 2 did not use screen media at all (56%). Screen use among this age group has been relatively stable for nearly a decade. With parents now forced to juggle multiple responsibilities at home, what will happen to screen use among children under 2? This could have important implications for early childhood development, or for future patterns of screen use among this cohort.

Reading

- As of early 2020, Black children and children in lower-income families had begun spending more time reading each day than in previous years, including e-reading. As school, libraries, and bookstores closed during the pandemic, this emerging familiarity with digital reading may bode well for children's literacy. Will we finally see a substantial jump in e-reading among young children? Or might time spent reading go down as access to print books becomes more challenging?

Media Content

- The amount of time children spend watching online videos had already doubled over the past few years. What might this mean in terms of the types of content they are exposed to, or their interactions with others online, especially if they are spending even more time in these activities now that they are stuck at home more often?

- Prior to the pandemic, children in the 5- to 8-year-old age group were beginning to use "connected" media applications, such as social gaming, more often. Many of these games and apps mean that children are interacting with other users online, in ways parents may not always be aware of. Given that this practice had already started as a mode of entertainment among this age group before the virus exploded, what might this mean for children whose only form of "play" may now be online, without the supervision of teachers, playground monitors, or even parents? Will their interactions with other gamers online lead to more cyberbullying and other negative experiences, or to a greater sense of social connection and new friendships?

- Before the pandemic, the use of educational content online was most dominant among children in the 2- to 4-year-old age group. Among 5- to 8-year-olds, content was becoming more focused on challenges, gaming, unboxing, and influencers. This trend could tip in either direction during the pandemic.

Earlier this year, parents had overwhelmingly positive views about their children's media lives. Most were not worried that their children were spending too much time with screens; the vast majority were satisfied with the amount and quality of educational content available, and most felt that the media their children used was helping their learning and creativity. As parents contend with working from home while supervising their children's online learning—at the same time that many playgrounds remain closed, after-school programs are cancelled, and playdates are still virtual—we don't know how or in what ways it will affect parents' satisfaction with, or concerns about, media and technology.

One potential danger the survey points to is the impact of media on children's physical activity, particularly in an era of school closures and stay-at-home orders. Over the years, the one downside parents have consistently seen regarding children's screen use was its effect on physical activity. In early 2020, 43% of parents said their child's screen use hurt their level of physical activity, and just 16% said it helped. This could be an opportunity for content providers to step in and start producing more content that motivates children to get up and get moving. But it is possible that the ready access to screen entertainment during this period of being home will exacerbate the likely negative impact of the pandemic on children's physical activity.

Finally, this research points to the need for a continuing focus in children's media research on the content to which children are exposed through media, be it around gender roles, racial and ethnic diversity, violence, STEM opportunities, kindness and caring, or social and emotional development. Considering that watching online videos on sites like YouTube is the activity children devote the most time to, understanding the nature of the content they are exposed to in that environment should be a top priority.

Indeed, it may be more important than ever for all those concerned with providing the healthiest possible environment for children's development to consider whether the amount of time children spend in media activities and the content they are accessing reflect the kinds of people we want to help them become.

Q1. **Is there a TV set in your household, or not?**

a.	Yes
b.	No

Q2. **Which of the following, if any, do you have in your household?** [Randomize, but hold a/b in order at top]

a.	*[If Q1=yes]* Cable or satellite television
b.	*[If Q1=yes]* A way to connect your television to the internet so you can download or stream TV shows or movies onto your TV set
c.	A subscription service, such as Netflix, Amazon Prime, Disney Plus, or Hulu, for streaming or downloading TV shows and movies
d.	A laptop or desktop computer
e.	High-speed internet access (cable, wireless, or DSL)
f.	A video game player like an Xbox, PlayStation, or Switch
g.	A virtual reality (VR) headset, such as Oculus Rift, Google Cardboard, or PlayStation VR
h.	An iPad or similar tablet device, such as a Galaxy Tab or other Android tablet, Microsoft Surface, or Kindle Fire
i.	An iPod Touch or similar device
j.	A Kindle or other e-reader
k.	A smart speaker, such as an Amazon Echo Dot, Google Home, or Apple HomePod
l.	A smartphone (can use it to go online)

[If Q1=yes]

Q3. **When someone is at home in your household, how often is the television on, even if no one is actually watching it?**

a.	Always
b.	Most of the time
c.	Some of the time
d.	Hardly ever
e.	Never

For this next set of questions, please think about your [FOCAL CHILD]. Some of these questions may be about things [CHILD] is too young to do. If that's the case, just mark the correct response and move on.

Q4. **Which of the following items does [CHILD] have, if any?** [Randomize]

a. [His/her] own smartphone
b. [His/her] own tablet, such as an iPad, Kindle Fire, or similar device
c. [His/her] own iPod Touch or similar device
d. [His/her] own educational game device, such as a LeapFrog LeapPad or VTech laptop
e. [His/her] own smartwatch or similar device

Q5. **We're interested in whether [CHILD] has ever used a mobile device, such as a smartphone or tablet, to do any of the following activities. Please mark any of the activities [CHILD] has ever done on a mobile device:**

a. Watch TV shows or movies
b. Watch online videos, such as on YouTube
c. Play games
d. Use apps
e. Read books

Q6. **We also want to know how often [CHILD] does various activities, or if [he/she] has never done these activities. How often does [CHILD]:** [Randomize]

a. Read or be read to
b. Watch television
c. Use a computer
d. Play video games on a player like an Xbox, Playstation, or Switch
e. Watch online videos, such as on YouTube
f. Use a mobile device (like a smartphone or tablet) to play games, watch videos, go online, or use apps
g. Listen to podcasts, stories, or audiobooks

Q7. **We're interested in how much time [CHILD] spent doing various activities yesterday. Some of these may be things [CHILD] is too young to do or never does. If that's the case, just mark "didn't do" and move on. Thinking just about YESTERDAY, how much time did [CHILD] spend:** [Rotate but block b/c and d–p in order]

Answers in hours and minutes, open-ended.

a. Listening to music
b. *[If Q6a=1–5]* Reading or being read to from a print book
c. *[If Q6a=1–5]* Reading or being read to on a tablet, phone, or e-reader
d. Watching DVDs or videotapes
e. *[If Q6b=1–5]* Watching television on a TV set
f. *[If Q6f=1–5]* Watching videos or TV shows on a mobile device like a smartphone or tablet
g. *[If Q6c=1–5]* Watching videos or TV shows on a computer
h. *[If Q6d=1–5]* Playing video games on a console or handheld video game player like an Xbox, PlayStation, or Switch
i. *[If Q6f=1–5]* Playing games on a smartphone or tablet
j. *[If Q6f=1–5]* Skyping or video-chatting on a smartphone or tablet
k. *[If Q6f=1–5]* Doing homework on a tablet
l. *[If Q6f=1–5]* Doing anything else on a smartphone or tablet, such as taking or looking at pictures or videos, looking things up, social networking, or using other types of apps not already covered
m. *[If Q6c=1–5]* Skyping or video-chatting on a computer
n. *[If Q6c=1–5]* Playing games on a computer
o. *[If Q6c=1–5]* Doing homework on a computer
p. *[If Q6c=1–5]* Doing anything else on a computer (taking or viewing photos, looking things up, social networking, other activities)
q. *[If Q2g=yes]* Using a virtual reality headset
r. *[If Q6g=1–5]* Listening to podcasts, stories, or audiobooks

[If Q7e=any amount of time]

Q8. **You wrote that [CHILD] spent [insert time] watching television on a TV set yesterday. About how much of that time, if any, was spent:** [Do not randomize or rotate]

Answers in hours and minutes, open-ended.

a. Watching shows you recorded earlier or watched through on demand
b. Watching shows you downloaded or streamed, such as through Netflix, Amazon Prime, Disney Plus, or Vudu
c. Watching live television
d. Watching videos on a site like YouTube (through the TV set)

Q9. **You also wrote that [CHILD] spent [insert time] watching television or videos on a mobile device yesterday. About how much of that time, if any, was spent:** [Do not randomize or rotate]

Answers in hours and minutes, open-ended.

a. Watching videos on a site like YouTube
b. Watching videos on social media sites like TikTok
c. Watching TV shows or movies through a service like Netflix, Amazon Prime, Disney Plus, or Vudu
d. Something else

Q10. **You also wrote that [CHILD] spent [insert time] watching television or videos on a computer yesterday. About how much of that time, if any, was spent:** [Do not randomize or rotate]

Answers in hours and minutes, open-ended.

a. Watching videos on a site like YouTube
b. Watching videos through social media sites like TikTok
c. Watching TV shows or movies through a service like Netflix, Amazon Prime, Disney Plus, or Vudu, or through a network's website
d. Something else

Q11. **How often, if ever, does [CHILD] do any of the following:** [Randomize but hold a/b as a block]

a. Watch educational TV shows like Sesame Street, StoryBots, or MythBusters
b. Watch kids' entertainment TV shows like Paw Patrol, Adventure Time, or SpongeBob SquarePants
c. *[If Q2d=yes]* Use educational games or programs on the computer
d. *[If Q4c=yes]* Play games on an educational device like a LeapFrog LeapPad or VTech laptop
e. *[If Q2h, Q2i, or Q2l=yes]* Play educational games, apps, or activities on a mobile device like a smartphone or tablet
f. *[If Q2f=yes]* Play games that are educational for him/her on a video game player like an Xbox, PlayStation, or Switch
g. Listen to educational podcasts

Q12. **[How often, if ever, does [CHILD] watch the following types of videos online, for example on YouTube?** [Randomize]

Response options: Often, sometimes, hardly ever, never

a. "How-to" videos (e.g., how to draw, cook, dance, make crafts, make things with Legos or PlayDoh, skateboard)
b. "Unboxing" videos (i.e., video of someone opening a new toy), or product demonstrations (such as showing off toys, make-up, clothes, etc.)
c. Nursery rhymes or songs
d. Video gaming/gameplay videos
e. Challenges/stunts/tricks videos
f. Animal videos
g. Learning/educational videos (i.e., alphabet, numbers, colors, shapes, feelings, etc.)

Q13. Does your child follow or subscribe to certain YouTube personalities, celebrities, or influencers?

a.	Yes
b.	No
c.	Don't know

Q13A How often, if ever, does [CHILD] see ads that are inappropriate for [HIM/HER] (such as too sexual, too violent, or for adult products like alcohol or vaping supplies) when [HE/SHE] is doing the following: [Randomize]

Response options: Often, sometimes, hardly ever, never

a.	*[If Q6b=1-5]* Watching television
b.	*[If Q6d=1-5 or Q6f=1-5]* Playing games on a mobile device or video game player
c.	*[If Q6e=1-5]* Watching online videos, such as on YouTube

Q14. How often, if ever, does [CHILD] do the following: [Randomize]

Response options: Often, sometimes, hardly ever, never

a.	*[If Q6b or Q6e=1–5; do NOT screen on language]* Watch Spanish-language television or videos
b.	*[If Q6c or Q6f=1–5]* Use a social networking site like Instagram, Snapchat or TikTok
c.	*[If Q6c or Q6f=1–5]* Play a "social" game online (like Minecraft, Animal Jam, Roblox, or Fortnite) with other kids
d.	*[If Q6f=1–5]* Use a mobile device when [he/she] eats at home
e.	*[If Q6f=1–5]* Use a mobile device when the family eats out at a restaurant
f.	*[If Q2k or Q2l=yes]* Ask questions or give commands to the voice-activated assistant on a phone (such as Siri)? *[If Q2l=yes: or to a smart speaker, such as Alexa or Google Assistant]*
g.	*[If Q6b or Q6d or Q6e or Q6f=1–5]* Watch television or videos, or play video games in the hour before bedtime

Q15. In which of the following ways does [CHILD] use the voice-activated assistant on a phone (such as Siri)?

[If Q2k=yes: or virtual assistant device (such as Alexa or Google Assistant)] [Randomize; anchor h]

a.	To get information
b.	To get jokes
c.	To play music
d.	To search for video
e.	Just to talk or fool around with
f.	To go to sleep
g.	To listen to stories
h.	Something else SPECIFY

Q16. **Thinking about the TV shows [CHILD] watches the most, what is the MAIN way [he/she] found those shows?**

[Randomize and anchor f–h at bottom]

a. Recommended by [his/her] friends
b. Watched by brothers or sisters or other relatives
c. Selected by you or another adult
d. [CHILD] found them [him/her] self
e. Promoted or featured by the platform (i.e., on the Netflix home screen or through autoplay)
f. Other (specify)
g. Don't know
h. [CHILD] doesn't do this

Q17. **Thinking about the online videos [CHILD] watches on sites like YouTube, what is the MAIN way [he/she] chooses them?**

[Randomize, anchor g–i]

a. Recommended by [his/her] friends
b. Watched by brothers or sisters or other relatives
c. You or another adult chooses them or sets up a playlist
d. [He/she] searches for them
e. [He/she] has specific channels or people [he/she] likes to follow
f. Through autoplay or suggestions from YouTube or other video sites
g. Other (specify)
h. Don't know
i. [CHILD] doesn't do this

Q18. **How often, if at all, does your child participate in organized after-school activities, such as going to aftercare, attending clubs, taking (art, music, or sports) lessons, being tutored, going to a community center, or participating on a sports team?** Response options: Every day, several days a week, once a week, never

Q19. **We're interested in the main reasons your child uses screen media. How important are each of the following reasons your child does things like watching television and videos or playing digital games?** [Randomize; block d and e together]

Response options: Very important, somewhat important, not too important, not important at all

a. For fun
b. Because they're bored
c. Because they learn things from it
d. Because you need to keep them occupied while you are out together (running errands, grocery shopping, at a restaurant)
e. Because you need the time to get other things done at home
f. Because their friends or siblings are doing it
g. To help them feel better when they are upset
h. To relax

Q20. Which is the MOST IMPORTANT reason?

Q21. When [CHILD] is doing the following, how often do you do it with [him/her]?

[Randomize items; split sample and reverse order of response options for half]

Response options: Most of the time, some of the time, hardly ever, never

a. *[If Q6b=1–5]* Watching [his/her] TV shows
b. *[If Q6e=1–5]* Watching online videos (such as on YouTube)
c. *[If Q6d=1–5]* Playing video games
d. *[If Q6f=1–5]* Using games or apps on a smartphone or tablet

Q22. Overall, based on the content of the media [CHILD] uses and the amount of time [he/she] spends using it, do you think [his/her] use of media helps, hurts, or makes no difference to [his/her]:

[Randomize; split sample and reverse order of response options for half]

Response options: Helps a lot, helps a little, makes no difference, hurts a little, hurts a lot

a. Social skills
b. Learning
c. Ability to focus
d. Behavior
e. Physical activity
f. Creativity
g. Emotional maturity

Q23. OPEN END: [Depending on responses above] Please give an example of a TV show, game, video, movie, app, or website that [helps/hurts] [his/her] behavior/social skills/ability to focus/emotional maturity? How and why do you think it affects your child?

[Randomly assign to one of these categories based on responses above.]

Q24. Do you agree or disagree with the following statements:

[Randomize; split sample and reverse response option order for half]

Response options: Strongly agree, somewhat agree, somewhat disagree, strongly disagree

a. It is difficult to get [CHILD] to stop using screen media when I ask.
b. I am satisfied with the amount and quality of educational screen media available for [CHILD].
c. I am overwhelmed by the variety of media options available to [CHILD].
d. [All qualified]

Q25. Thinking about how much time [CHILD] spends with screen media, which of the following statements comes closest to your view? [Split sample and reverse response option order for half]

a. [CHILD] spends too MUCH time with screen media
b. [CHILD] spends too LITTLE time with screen media
c. [CHILD] spends the RIGHT amount of time with screen media

[If Q6b, Q6c, Q6d, Q6e, or Q6f=1–5]

Q26. Do you ever use any type of device or app for limiting [CHILD]'s screen time?

a. Yes
b. No
c. Don't know
d. [All qualified]

Q27. As you think about [CHILD]'s use of screen media, today and in the future, how concerned are you about each of the following? [Randomize; split sample and reverse response order for half]

Response options: Very concerned, somewhat concerned, not too concerned, not at all concerned

a. Spending too much time with media
b. How much sexual content is in media
c. How much violent content is in media
d. People vaping or smoking cigarettes in the media
e. Depictions of drugs and alcohol in the media
f. Cyberbullying online
g. Gender stereotypes of girls and boys in the media
h. Racial and ethnic stereotypes in the media
i. Companies collecting data about [CHILD] through the media
j. How much advertising and materialism there is in the media

About Common Sense

Common Sense is the nation's leading nonprofit organization dedicated to improving the lives of all kids and families by providing the trustworthy information, education, and independent voice they need to thrive in the 21st century. Our independent research is designed to provide parents, educators, health organizations, and policymakers with reliable, independent data on children's use of media and technology and the impact it has on their physical, emotional, social, and intellectual development. For more information, visit **www.commonsense.org/research**.

For inquiries, contact **research**@**commonsense.org**.

common sense®