

# Students of Color Caught in the Homework Gap

This spring, the COVID-19 pandemic caused a near-total shutdown of the U.S. school system, forcing more than 55 million students to transition to home-based remote learning practically overnight. In most cases, that meant logging in to online classes and accessing lessons and assignments through a home internet connection.

Sadly, that was not an option for children in **one out of three Black, Latino, and American Indian/Alaska Native households**. Nationwide, across all racial and ethnic groups, **16.9 million children** remain logged out from instruction because their families lack the home internet access necessary to support online learning, a phenomenon known as the "homework gap."

The following analysis conducted by John B. Horrigan, a national expert on technology adoption, for the Alliance for Excellent Education (All4Ed), National Indian Education Association (NIEA), National Urban League (NUL), and UnidosUS of data from the 2018 American Community Survey<sup>1</sup> (ACS) shows that millions of households with children under the age of 18 years lack two essential elements for online learning: (1) high-speed home internet service and (2) a computer. Furthermore, these disparities *disproportionately impact* students of color, students from low-income families, and those in rural communities. As states and districts develop plans to extend online learning into the 2020-2021 school year, school and district leaders must ensure that all students have equitable access to the devices and connectivity necessary for academic success. That means understanding the extent of the homework gap-and what it will take to close it.

# 8.4 Million Households with Children Do Not Have High-Speed Home Internet Service

This includes 16.9 million children. For this analysis, "highspeed home internet" refers to a wireline broadband internet





subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). While many households have *wireless* broadband internet access through smartphones, these services generally are insufficient for educational purposes since they do not have the same capacity, reliability, or speeds available through *wireline* services.<sup>2</sup> A study from Michigan State University finds that students who do not have home internet access, or who rely solely on a mobile plan for their internet access, spend more time on their homework, have lower grade point averages, and have weaker digital skills, even after controlling for socioeconomic factors that potentially influence academic performance.<sup>3</sup> In fact, "[t]he gap in digital

# **Key Findings**

- 1. 16.9 million children lack the high-speed home internet access necessary to support online learning.
- 2. 7.3 million children do not have a desktop, laptop, or tablet computer.
- 3. One in three Black, Latino, and American Indian/Alaska Native families do not have high-speed home internet.
- 4. One in three families who earn less than \$50,000 annually do not have high-speed home internet.
- 5. Two in five families in rural areas do not have high-speed home internet.





skills between students with no home access or cell phone only and those with fast or slow home Internet access is equivalent to the gap in digital skills between 8th and 11th grade students," according to the study.<sup>4</sup>

## 3.6 Million Households Do Not Have a Computer, which Puts Nearly 7.3 Million Children at an Academic Disadvantage

In this analysis, a computer refers to a laptop, desktop, or tablet. The number of children without a computer is an undercount of the need related to online learning because ACS asks whether the *household* has a computer, not whether each child in the household has a computer. This is an important distinction because each school-aged child needs a computer to participate in online learning. Students who rely exclusively on smartphones for completing homework must contend with smaller screens on slower devices that have fewer features. Smartphone applications lack the full functionality of software that is available on computers. Therefore it may be difficult, if not impossible, for students to complete assignments that require detailed writing, editing, calculations, and graphics. Additionally, these students may need to monitor data caps or recharge prepaid phone plans to maintain their internet access.<sup>5</sup> Consequently, these students are less likely to complete and

submit assignments online outside of school or engage in other online activities such as conducting research, video chatting with peers about school work, or looking up classroom information.<sup>6</sup>

## Students of Color Are Less Likely to Have Access to High-Speed Home Internet Service and Computers

Nationally, only about 23 percent of all households with children do not have high-speed home internet service and about 10 percent do not have a computer. However, rates vary widely by race. Thirty-four percent of American Indian/Alaska Native families and about 31 percent each of Black and Latino families lack access to high-speed home internet compared to only about 21 percent of White families. All told, 4.7 million Black, Latino, Asian, and American Indian/Alaska Native families combined lack the high-speed home internet service necessary to support online learning and to engage productively in learning outside of the classroom.

Furthermore, lack of high-speed home internet access disproportionately affects children of color. For example, Latino households make up 20.9 percent of all households with children, but represent 28.7 percent of households without high-speed home internet access. This totals 2.4

	White	Asian	Black	Latino	American Indian/Alaska Native
Percentage of Households Without High-Speed Home Internet	20.9%	12.3%	30.6%	31.2%	34.2%
Percentage of Households Without a Computer	7.9%	3.5%	17.2%	17.0%	15.8%

#### TABLE 1: Lack of Internet and Device Access by Race and Ethnicity

Note: "Household" refers to households with one or more children age 17 years or younger.

#### TABLE 2: Lack of Internet and Device Access by Household Income

	All Households Annual Income Below \$25,000				Annual Income Between \$75,000 and \$150,000	Annual Income Above \$150,000
Percentage of Households Without High- Speed Home Internet	22.7%	44.5%	32.2%	23.6%	15.1%	8.4%
Percentage of Households Without a Computer	9.8%	28.7%	15.9%	8.6%	3.5%	1.7%

Note: "Household" refers to households with one or more children age 17 years or younger.

million Latino families and 5.1 million Latino children. Similarly, Black households make up 14.4 percent of all households with children but represent 19.5 percent of households without high-speed home internet access. This totals 1.6 million Black families and 3.3 million Black children.

Likewise, home access to computers and other devices is limited for students of color. About 17 percent each of Black and Latino families and nearly 16 percent of American Indian/ Alaska Native families do not have a computer at home, compared to only 8 percent of White families.

## The Homework Gap Is Widest for Children from Low-Income Families

Four in ten families that earn less than \$25,000 annually do not have high-speed home internet access and three in ten do not have a computer. Similarly, among households that earn between \$25,000 and \$50,000 annually, one-third lack highspeed home internet service and nearly one-fifth do not have a computer. All told, 4.6 million families who earn less than \$50,000 per year do not have access to the high-speed home internet service necessary for online learning.

## Families in Rural Areas Are Less Likely to Have Access to High-Speed Home Internet Service and Computers

Roughly 13 percent of the nation's households with children live in nonmetropolitan<sup>7</sup> (or rural) areas. Among them, 1.7 million households do not have high-speed home internet service. That is nearly two out of every five families living in rural locations. The greatest disparities exist in rural southern and southwestern states, with Mississippi having the highest percentage of families who lack high-speed home internet service—nearly 42 percent.

### **Closing the Homework Gap**

Most of the burden for equipping students with devices and internet access for ongoing online learning will fall to schools, districts, and states. However, they cannot resolve the existing disparities alone. Bringing high-speed home internet access to all 8.4 million households that currently are offline requires Congress to approve additional funding to support students' learning needs. All4Ed, NIEA, NUL, and UnidosUS urge Congress to include the Emergency Educational Connections Act and appropriate \$6.8 billion through the federal E-rate program to cover immediate costs related to high-speed home internet access and devices in any upcoming funding packages passed

#### TABLE 3: Lack of Internet and Device Access by Location

	Nonmetropolitan "Rural" Locations	Metropolitan Locations
Percentage of Households Without High-Speed Home Internet	36.2%	20.9%
Percentage of Households Without a Computer	14.2%	9.3%

**Note:** "Household" refers to households with one or more children age 17 years or younger. Following the U.S. Census Bureau's practice, this table defines metropolitan areas as urbanized areas of 50,000 or more people and urban clusters of at least 2,500 people but less than 50,000. Remaining areas are nonmetropolitan or "rural."

### **TABLE 4: Cost of Closing the Homework Gap**

Technology	Households/Children Without Access	Cost per Household/ Child to Provide Access	Total Cost
High-Speed Home Internet	8,365,183 households	\$600 annually	\$5,019,109,800
Computer	7,273,556 children	\$250 one-time cost	\$1,818,389,000
Total			\$6,837,498,800

**Note:** This chart calculates the costs of high-speed home internet service based on the number of households without access since a single internet subscription serves multiple family members. By contrast, this chart calculates computer costs based on the number of children without a device since each child needs an individual computer to participate in online learning.

in response to the COVID-19 pandemic. Ultimately, additional substantial resources will be necessary to build out the infrastructure in rural areas where connectivity is not currently available. This is critical to do in the long term to ensure students in isolated regions have full access to a high-quality education. However, these costs fall outside the scope of the immediate response to COVID-19 necessary for students to participate in online learning during the 2020-2021 school year.

### Conclusion

There are reasons why socioeconomic divides exist within low-income communities and communities of color in the United States. America's racial inequities stem from 400 years of systemic racism and federally sanctioned discriminatory policies born from this nation's original sins-the enslavement of Black people and the disenfranchisement and forced relocation of American Indian/Alaska Native communities. The fact that Black Americans were not allowed to read, immigrant children were denied equal access to a free public education, and that Black, Latino, and American Indian/Alaska Native communities were excluded from economic opportunities have had lingering effects on current generations: subpar education, low-wage jobs, and the lack of available or affordable broadband options to allow children to engage in distance learning. These injustices must be confronted *head on* if the nation hopes to live up to its promise of justice and equality for all. Public policy must not be subtle nor incremental in addressing the issues that American school-age children face. We need bold and highly focused solutions that dismantle the systems that keep our children from succeeding.

Simply put, COVID-19 did not create the homework gap. However, because of COVID-19, the nation must accelerate efforts to close it.

There are many unanswered questions about the 2020-2021 school year, yet one thing is certain: many students will receive their education online. Therefore, students without high-speed home internet will be severely disadvantaged. The gap between students who are "logged in" and "logged out" could set back a generation of American students. Thankfully, this is a solvable problem. By appropriating \$6.8 billion in the next COVID-19 legislative package, Congress can provide the nation's students with the tools they need and deserve to receive an excellent education.

# **Additional Resources**

To learn more about this analysis and access an interactive map with state data about the homework gap, visit all4ed.org/homeworkgap.

To compare internet and device access across states and demographic categories, view the tables in the appendices of this report.

Appendix A: Access to High-Speed Home Internet and Devices by Race, State Comparisons

Appendix B: Access to High-Speed Home Internet and Devices by Income, State Comparisons

Appendix C: Access to High-Speed Home Internet and Devices by Location, State Comparisons

## **Endnotes**

- John B. Horrigan, senior fellow at the Technology Policy Institute, conducted the data analysis referenced in this document. To read the full methodology for this 1 analysis, visit all4ed.org/homeworkgap
- Columbia Telecommunications Corporation, Mobile Broadband Service Is Not an Adequate Substitute for Wireline (Kensington, MD: Author, 2017). 2
- 3 K. Hampton et al., Broadband and Student Performance Gaps (East Lansing, MI: James H. and Mary B. Quello Center, Michigan State University, 2020).
- 4 Ibid.
- 5 Ibid.
- 6 Ibid.
- 7
- Following the U.S. Census Bureau's practice, this analysis defines metropolitan areas as urbanized areas of 50,000 or more people and urban clusters of at least 2,500 people but less than 50,000. Remaining areas are nonmetropolitan. The American Community Survey does not use the term "rural" in characterizing geographies.









@WeAreUnidosUS

The Alliance for Excellent Education (All4Ed) is a Washington, DC-based national policy, practice, and advocacy organization dedicated to ensuring that all students, particularly those underperforming and those historically underserved, graduate from high school ready for success in college, work, and citizenship. all4ed.org

The National Indian Education Association (NIEA) advances comprehensive educational opportunities for all Native students. Serving as the critical link between Native communities and the diverse array of institutions that serve our students, NIEA holds all accountable for improving achievement. Through advocacy, capacity-building, and education, NIEA supports Native students and their communities to succeed. NIEA.org

The National Urban League is a historic civil rights organization dedicated to economic empowerment in order to elevate the standard of living in historically underserved urban communities. The National Urban League spearheads the efforts of its 90 local affiliates through the development of programs, public policy research and advocacy, providing direct services that impact and improve the lives of more than 2 million people annually nationwide. Visit nul.org and follow us on Twitter and Instagram: @NatUrbanLeague.

UnidosUS, previously known as NCLR (National Council of La Raza), is the nation's largest Hispanic civil rights and advocacy organization. Through its unique combination of expert research, advocacy, programs, and an Affiliate Network of nearly 300 community-based organizations across the United States and Puerto Rico, UnidosUS simultaneously challenges the social, economic, and political barriers that affect Latinos at the national and local levels. For more than 50 years, UnidosUS has united communities and different groups seeking common ground through collaboration, and that share a desire to make our country stronger. For more information on UnidosUS, visit unidosus.org or follow us on Facebook, Instagram, and Twitter.

### Appendix A: Access to High-Speed Home Internet and Devices by Race, State Comparisons

TABLE A1: Per	centage	of Hous	eholds V	Vithout	High-Spe	ed Home	TABLE A1: Percentage of Households Without High-Speed Home						
Internet Acces	s by Rad	ce, State	Compar	isons			Internet Access	by Race	, State C	omparis	ons (con	tinued)	
State	All	White	Asian	Black	Latino	American Indian/Alaska Native	State	All	White	Asian	Black	Latino	American Indian/Alaska Native
Alabama	31.8%	28.8%	18.4%	37.1%	49.6%	54.5%	Missouri	27.8%	26.8%	16.9%	35.4%	34.2%	30.7%
Alaska	29.5%	23.7%	35.6%	z21.1%	23.6%	54.1%	Montana	25.7%	24.7%	0.0%	0.0%	27.3%	39.8%
Arizona	24.6%	22.1%	10.2%	30.5%	33.0%	34.2%	Nebraska	21.0%	19.7%	14.3%	41.4%	34.5%	49.9%
Arkansas	39.0%	37.4%	13.8%	46.2%	45.5%	37.5%	Nevada	21.7%	19.5%	13.8%	28.5%	30.1%	26.9%
California	19.9%	19.0%	11.2%	22.9%	28.3%	27.1%	New Hampshire	13.7%	13.6%	13.1%	33.5%	31.0%	0.0%
Colorado	17.2%	16.4%	13.4%	23.0%	28.7%	29.7%	New Jersey	14.4%	11.8%	7.2%	21.2%	23.5%	15.7%
Connecticut	14.2%	11.0%	13.3%	23.3%	25.2%	25.3%	New Mexico	34.0%	29.9%	13.7%	45.7%	37.7%	55.6%
Delaware	18.4%	17.9%	7.5%	23.4%	18.7%	53.8%	New York	20.1%	17.4%	16.7%	25.4%	26.3%	25.6%
District of	18.5%	4.8%	29.8%	27.0%	25.3%	0.0%	North Carolina	22.7%	19.1%	12.8%	30.6%	36.6%	24.2%
Columbia							North Dakota	20.9%	17.5%	37.4%	57.7%	36.4%	33.7%
Florida	22.1%	19.6%	11.3%	31.1%	26.4%	21.0%	Ohio	21.4%	19.9%	12.4%	29.9%	28.5%	24.4%
Georgia	24.9%	22.7%	10.9%	28.8%	38.9%	37.4%	Oklahoma	34.6%	32.2%	19.3%	42.2%	41.4%	56.6%
Hawaii	16.9%	12.6%	13.5%	13.8%	16.5%	26.6%	Oregon	21.1%	20.1%	12.9%	32.4%	36.9%	24.9%
ldaho	24.4%	23.6%	16.7%	18.1%	40.4%	33.3%	Pennsylvania	17.6%	16.0%	13.1%	26.0%	28.3%	28.4%
Illinois	21.8%	19.5%	13.8%	32.3%	30.5%	22.7%	Rhode Island	15.1%	12.5%	9.3%	22.2%	26.4%	0.0%
Indiana	27.0%	26.1%	24.0%	34.4%	33.2%	35.0%	South Carolina	26.5%	20.5%	0.0%	40.8%	39.8%	32.3%
lowa	24.3%	23.3%	12.6%	40.9%	42.5%	25.2%	South Dakota	22.6%	17.1%	43.1%	24.7%	35.4%	55.3%
Kansas	22.9%	22.5%	12.1%	27.2%	35.5%	14.7%	Tennessee	27.8%	24.7%	16.8%	39.6%	36.6%	34.4%
Kentucky	27.7%	26.1%	13.1%	41.1%	40.9%	36.4%	Texas	28.6%	28.4%	11.8%	30.8%	37.8%	24.8%
Louisiana	30.6%	27.7%	18.0%	36.5%	36.5%	21.5%	Utah	19.0%	17.5%	21.9%	24.8%	31.7%	38.6%
Maine	16.5%	16.5%	20.6%	16.2%	21.5%	38.3%	Vermont	21.5%	22.0%	8.7%	13.0%	0.0%	22.4%
Maryland	16.4%	13.4%	9.2%	20.5%	25.5%	17.1%	Virginia	20.8%	18.9%	7.1%	29.8%	23.0%	22.0%
Massachusetts	13.2%	11.9%	10.2%	20.9%	24.6%	28.9%	Washington	15.8%	14.3%	8.7%	26.3%	31.7%	27.2%
Michigan	23.7%	21.8%	14.8%	34.5%	29.5%	28.8%	West Virginia	25.8%	25.5%	25.5%	38.5%	30.5%	49.4%
							Wisconsin	21.6%	19.0%	19.0%	39.0%	30.3%	30.7%
Minnesota	19.0%	17.3%	14.4%	27.2%	34.6%	36.9%	Wyoming	23.8%	23.3%	50.0%	0.0%	21.3%	39.0%
Mississippi	41.9%	38.4%	31.3%	46.6%	47.7%	49.0%	United States	22.7%	20.9%	12.3%	30.6%	31.2%	34.2%

Notes: "High-speed home internet access" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). "Households" refers to households with one or more children age 17 years or younger. A value of "0" indicates one of the following: (1) the number of households within a given racial category was too small for the state to report data or (2) all households within a given racial category have adequate interent access. The American Community Survey does not provide further clarification about these values.

TABLE A2: Number of Children Without High-Speed Home Internet Access by Race, State	
Comparisons	

TABLE A2: Number of Children Without High-Speed Home Internet Access by Race, State Comparisons (*continued*)

State	All	White	Asian	Black	Latino	American Indian/Alaska Native	State	All	White	Asian	Black	Latino	American Indian/Alaska Native
Alabama	332,223	200,520	3,221	110,258	33,881	7,938	Montana	57,569	49,208	0	0	4,472	10,055
Alaska	52,552	26,010	5,261	1,397	2,463	24,303	Nebraska	107,141	89,512	1,948	9,982	27,404	6,357
Arizona	415,234	291,860	7,619	33,000	219,779	37,632	Nevada	147,923	85,019	7,597	19,475	77,631	6,002
Arkansas	296,639	212,844	1,838	56,879	39,318	6,914	New Hampshire	36,507	33,014	1,625	2,216	4,292	0
California	1,763,038	998,147	144,307	126,525	1,163,710	48,941	New Jersey	284,879	151,786	16,155	62,338	119,251	2,187
Colorado	228,987	186,293	7,713	17,276	100,861	9,423	New Mexico	151,279	51,959	589	2,146	43,927	14,556
Connecticut	110,176	61,585	6,309	26,238	41,836	2,518	New York	833,365	449,101	61,698	181,618	237,160	11,370
Delaware	34,353	1,908	984	15,639	2,863	0	North Carolina	525,858	294,019	13,604	163,266	117,862	10,685
District of Columbia	20,278	22,166	986	11,286	5,280	724	North Dakota	37,255	26,373	1,664	4,311	2,441	6,011
Florida	859,018	547,060	16,224	244,123	317,667	6,077	Ohio	579,779	433,238	10,028	129,283	37,648	5,609
Georgia	625,197	320,147	13,638	241,590	125,720	9,733	Oklahoma	345,997	242,770	5,761	41,921	59,519	75,140
Hawaii	51,032	15,763	21,373	1,350	6,283	1,548	Oregon	192,235	154,371	6,857	8,032	62,168	23,296
Idaho	110,504	100,104	1,348	929	28,517	8,642	Pennsylvania	475,762	342,380	15,713	92,323	74,802	5,019
Illinois	635,855	410,138	26,132	137,750	196,496	4,546	Rhode Island	32,396	20,590	932	3,994	13,609	0
Indiana	438,365	357,972	9,705	61,250	53,047	13,175	South Carolina	283,081	143,626	0	128,202	33,799	3,393
lowa	184,572	158,930	3,293	17,481	27,396	1,478	South Dakota	48,879	30,431	712	2,245	4,312	17,050
Kansas	171,750	144,201	3,561	14,191	38,219	2,367	Tennessee	434,739	290,366	5,812	123,229	44,253	4,550
Kentucky	286,447	234,880	2,697	42,029	17,436	831	Texas	2,104,514	1,519,150	46,963	292,164	1,256,206	21,146
Louisiana	318,352	179,860	3,660	127,763	23,538	2,888	Utah	181,255	149,241	7,584	3,461	42,080	5,700
Maine	42,603	40,179	1,227	1,503	1,069	1,214	Vermont	23,184	23,044	134	433	0	221
Maryland	220,714	97,718	10,182	86,921	45,775	2,152	Virginia	393,850	246,429	11,376	118,215	52,019	5,000
Massachusetts	185,053	126,078	12,382	31,978	56,888	2,980	Washington	280,297	191,495	16,771	25,179	98,368	13,721
Michigan	536,377	383,606	14,513	125,190	37,525	9,677	West Virginia	96,684	90,585	529	4,780	2,077	411
Minnesota	264,334	184,337	12,461	44,036	30,226	9,655	Wisconsin	297,324	215,192	9,832	52,946	38,457	6,394
Mississippi	290,739	145,878	1,761	134,190	11,847	4,459	Wyoming	29,683	26,784	232	0	2,917	2,805
Missouri	394,745	315,311	5,735	68,332	23,957	6,660	United States	16,850,575	11,113,180	582,243	3,250,866	5,108,271	483,151

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And <br< th=""><th>State</th><th>All</th><th>White</th><th>Asian</th><th>Black</th><th>Latino</th><th>Indian/Alaska</th><th>State</th><th>All</th><th>White</th><th>Asian</th><th>Black</th><th>Latino</th><th>A Ind</th></br<>	State	All	White	Asian	Black	Latino	Indian/Alaska	State	All	White	Asian	Black	Latino	A Ind
AndrageA for a baseB for a base <t< td=""><td>Alabama</td><td>14.2%</td><td>10.0%</td><td>6.9%</td><td>22.5%</td><td>30.6%</td><td>33.7%</td><td>Montana</td><td>8.0%</td><td>6.4%</td><td>0.0%</td><td>0.0%</td><td>9.7%</td><td></td></t<>	Alabama	14.2%	10.0%	6.9%	22.5%	30.6%	33.7%	Montana	8.0%	6.4%	0.0%	0.0%	9.7%	
Arran         11 Mathematical         0 Mathematical<	Alaska	8.0%	3.5%	6.6%	4.2%	13.0%	22.2%	Nebraska	8.7%	8.0%	6.1%	12.9%	24.0%	
ArbanesJoinJoinJoinJoinJoinJoinJoinJoinJoinCaliforia828738238113813681097 <td>Arizona</td> <td>11.3%</td> <td>9.6%</td> <td>3.0%</td> <td>17.1%</td> <td>17.6%</td> <td>27.8%</td> <td>Nevada</td> <td>8.8%</td> <td>6.8%</td> <td>3.9%</td> <td>13.1%</td> <td>15.3%</td> <td></td>	Arizona	11.3%	9.6%	3.0%	17.1%	17.6%	27.8%	Nevada	8.8%	6.8%	3.9%	13.1%	15.3%	
Catiformial8.2.%7.3.% <td>Arkansas</td> <td>17.0%</td> <td>13.5%</td> <td>2.1%</td> <td>32.7%</td> <td>25.2%</td> <td>13.9%</td> <td>New Hampshire</td> <td>4.5%</td> <td>4.3%</td> <td>7.2%</td> <td>8.1%</td> <td>7.9%</td> <td></td>	Arkansas	17.0%	13.5%	2.1%	32.7%	25.2%	13.9%	New Hampshire	4.5%	4.3%	7.2%	8.1%	7.9%	
Colorade         Fixe	California	8.2%	7.3%	2.3%	11.5%	13.6%	10.9%	New Jersey	6.1%	4.4%	1.2%	9.7%	14.1%	
Image ConceitorImage AImage AImage 	Colorado	7.5%	6.7%	5.6%	11.5%	18.2%	12.4%	New Mexico	15.9%	12.7%	6.3%	18.7%	17.6%	
Normal Debarse ColumbiaNormal Alty <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>New York</td><td>9.1%</td><td>6.9%</td><td>5.3%</td><td>12.5%</td><td>15.1%</td><td></td></t<>								New York	9.1%	6.9%	5.3%	12.5%	15.1%	
Interier Columbia         Interier Projection Columbia         Interier Projection Columbia         Interier Projection Projection Columbia         Interier Projection Proj								North Carolina	10.4%	7.7%	5.4%	16.0%	21.7%	
ColumbiaFirst is in the series of								North Dakota	7.4%	3.6%	3.3%	41.9%	11.5%	
Notice $3.3.4$ $3.3.4$ $1.3.4$ $3.0.4$ <t< td=""><td></td><td>7.8%</td><td>0.6%</td><td>12.2%</td><td>11.5%</td><td>12.0%</td><td>28.0%</td><td>Ohio</td><td>9.9%</td><td>8.0%</td><td>4.4%</td><td>20.3%</td><td>17.5%</td><td></td></t<>		7.8%	0.6%	12.2%	11.5%	12.0%	28.0%	Ohio	9.9%	8.0%	4.4%	20.3%	17.5%	
lateringline<	Florida	9.5%	7.5%	3.3%	17.6%	11.5%	9.0%	Oklahoma	14.3%	12.2%	9.0%	24.2%	24.4%	
Name $6.5.4$ $6.6.4$ $6.5.4$ $6.5.4$ $6.5.4$ $6.5.4$ $1.6.4$	Georgia	11.0%	8.5%	3.6%	14.8%	21.8%	15.5%	Oregon	7.5%	7.2%	1.3%	9.3%	21.9%	
Linois         9.3%         6.3%         9.3%         9.3%         1.1.3%         1.1.3%         1.1.3%         1.1.3%         1.1.3%         1.1.3%         0.1.1.3% <th< td=""><td>Hawaii</td><td>8.3%</td><td>4.6%</td><td>5.7%</td><td>4.7%</td><td>9.5%</td><td>7.8%</td><td>Pennsylvania</td><td>8.1%</td><td>6.7%</td><td>6.3%</td><td>14.2%</td><td>21.3%</td><td></td></th<>	Hawaii	8.3%	4.6%	5.7%	4.7%	9.5%	7.8%	Pennsylvania	8.1%	6.7%	6.3%	14.2%	21.3%	
Initial $13.34$ $23.37$ $23.37$ $23.32$ $23.28$ <	daho	6.9%	6.4%	9.5%	4.4%	15.9%	14.2%	Rhode Island	6.2%	4.5%	1.6%	13.6%	12.0%	
Initial11.5%9.5%9.5%2.52%2.00%6.5%6.5%1.0%1.0%1.0%1.0%1.0%1.0% $1.0\%$ $1.0\%$ $1.0\%$ $2.5\%$ 2.31%owa8.6%7.6%8.3%1.2%2.1%2.62%1.20%1.20%1.3%9.7%6.9%2.59%2.31%tentocky9.6%8.3%1.2%2.1%2.62%1.2% <t< td=""><td>llinois</td><td>9.1%</td><td>6.3%</td><td>3.8%</td><td>20.0%</td><td>14.0%</td><td>13.8%</td><td>South Carolina</td><td>13.1%</td><td>8.1%</td><td>0.5%</td><td>24.1%</td><td>25.2%</td><td></td></t<>	llinois	9.1%	6.3%	3.8%	20.0%	14.0%	13.8%	South Carolina	13.1%	8.1%	0.5%	24.1%	25.2%	
0.001 $0.001$ <	ndiana	11.3%	9.4%	9.3%	23.2%	20.6%	8.6%	South Dakota	10.6%	7.3%	28.7%	2.3%	26.2%	
Name $3.6\%$ $3.6\%$ $1.2\%$ $2.1\%$ $2.0\%$ $1.2\%$ $2.2\%$ $1.7\%$ $1.2\%$ $1.2\%$ $2.2\%$ $1.7\%$ $1.2\%$	owa	8.6%	7.6%	4.5%	24.1%	21.1%	10.3%	Tennessee	13.0%	9.7%	6.9%	25.9%	23.1%	
Nendexy11.1%10.8%26.8%22.5%27.8%27.8%10.0%10.0%10.0%10.0%10.0%0.0%0.0%0.0%Maine $6.6\%$ $5.7\%$ $6.2\%$ $6.2\%$ $52.9\%$ $0.7\%$ $25.0\%$ $25.0\%$ $7.5\%$ $6.1\%$ $0.7\%$ $0.0\%$ $0.0\%$ $0.0\%$ Maryland $6.2\%$ $4.2\%$ $1.9\%$ $8.2\%$ $15.9\%$ $2.1\%$ $7.5\%$ $6.6\%$ $5.2\%$ $0.0\%$ $13.3\%$ $13.0\%$ $13.3\%$ $15.4\%$ Massachusetts $5.7\%$ $4.6\%$ $2.6\%$ $11.2\%$ $15.5\%$ $1.1\%$ $1.1\%$ $6.6\%$ $5.2\%$ $3.0\%$ $13.3\%$ $18.7\%$ Minesota $5.7\%$ $3.7\%$ $2.6\%$ $21.2\%$ $15.5\%$ $14.1\%$ $11.6\%$ $11.3\%$ $0.0\%$ $23.0\%$ $26.2\%$ Minesota $5.7\%$ $3.7\%$ $4.5\%$ $15.6\%$ $14.7\%$ $23.4\%$ $8.6\%$ $5.8\%$ $10.1\%$ $25.8\%$ $15.8\%$ Mississipi $17.1\%$ $12.3\%$ $4.1\%$ $23.6\%$ $25.3\%$ $20.0\%$ $8.6\%$ $5.8\%$ $10.1\%$ $25.8\%$ $15.8\%$	Kansas	9.6%	8.3%	1.2%	21.7%	26.2%	12.0%	Texas	14.2%	13.3%	4.5%	17.8%	22.1%	
Maine $1.6.00$ $1.0.00$ <	Kentucky	12.1%	10.8%	8.8%	20.5%	25.6%	27.8%	Utah	4.1%	2.8%	6.1%	14.4%	10.6%	
Maryland         6.2%         4.2%         1.9%         8.2%         1.5.%         2.1%           Massachusetts         5.7%         4.6%         2.6%         11.2%         15.5%         1.7%           Minesota         5.7%         3.7%         2.6%         21.2%         15.5%         14.1%           Minesota         5.7%         3.7%         2.6%         21.2%         15.5%         14.1%           Minesota         5.7%         3.7%         4.5%         15.6%         14.7%         23.4%           Mississipi         17.1%         12.3%         41.0%         25.3%         20.0%         8.6%         5.8%         10.1%         25.8%         15.8%	Louisiana	15.5%	10.0%	4.9%	26.1%	22.2%	17.9%	Vermont	3.0%	3.1%	0.0%	0.0%	0.0%	
Massachusetts         5.7%         4.6%         2.6%         11.2%         15.5%         1.1%           Michigan         9.5%         7.5%         2.6%         2.12%         15.5%         14.1%           Minesota         5.7%         3.7%         4.5%         2.6%         15.5%         14.1%           Mississipi         11.1%         2.6%         15.6%         11.6%         11.3%         0.0%         23.0%         26.2%           Minesota         5.7%         3.7%         4.5%         15.6%         14.1%         Minesota         8.6%         5.8%         10.1%         25.8%         15.8%           Minesota         17.1%         12.3%         4.1%         23.6%         20.0%         20.0%         8.6%         5.8%         0.0%         25.8%         15.8%	Maine	6.6%	5.7%	6.2%	52.9%	0.7%	25.0%	Virginia	7.5%	6.1%	0.7%	13.0%	15.4%	
Massachusetts         5.7%         4.6%         2.6%         11.2%         15.5%         1.7%           Michigan         9.5%         7.5%         2.6%         21.2%         15.5%         14.1%           Minnesota         5.7%         3.7%         4.5%         15.6%         14.7%         23.4%           Mississipi         17.1%         12.3%         4.1%         23.6%         25.3%         20.0%	Maryland	6.2%	4.2%	1.9%	8.2%	15.9%	2.1%	Washington	6.6%	5.2%	3.0%	13.3%	18.7%	
Minesota         9.5%         7.5%         2.6%         21.2%         15.5%         14.1%           Minesota         5.7%         3.7%         4.5%         15.6%         14.7%         23.4%           Mississipi         17.1%         12.3%         4.1%         25.3%         20.0%	Massachusetts	5.7%	4.6%	2.6%	11.2%	15.5%	1.7%							
Ainesota       5.7%       3.7%       4.5%       15.6%       14.7%       23.4%       Mark       Mark <td>Aichigan</td> <td>9.5%</td> <td>7.5%</td> <td>2.6%</td> <td>21.2%</td> <td>15.5%</td> <td>14.1%</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Aichigan	9.5%	7.5%	2.6%	21.2%	15.5%	14.1%							
Mississippi 17.1% 12.3% 4.1% 23.6% 25.3% 20.0%	Minnesota	5.7%	3.7%	4.5%	15.6%	14.7%	23.4%	Wisconsin	8.6%	5.8%	10.1%	25.8%	15.8%	
	Mississippi	17.1%	12.3%	4.1%	23.6%	25.3%	20.0%	Wyoming	8.3%	8.0%	0.0%	0.0%	7.4%	
Missouri 10.9% 8.9% 0.7% 22.2% 21.9% 9.8% Onted states 5.5% 7.5% 5.5% 17.2% 17.5%		10.0%	8.0%	0.7%				United States	9.8%	7.9%	3.5%	17.2%	17.0%	

Notes: "Computer" refers to a laptop, desktop, or tablet computer. "Households" refers to households with one or more children age 17 years or younger. A value of "0" indicates one of the following: (1) the number of households within a given racial category was too small for the state to report data or (2) all households within a given racial category have adequate computer access. The American Community Survey does not provide further clarification about these values.

TABLE A4: Numb	er of Childrer	n Without a Co	omputer by Ra	ice, State Con	nparisons		TABLE A4: Num	ber of Childro	en Without a C	Computer by F	Race, State Co	omparisons (co	ontinued)
State	All	White	Asian	Black	Latino	American Indian/Alaska Native	State	All	White	Asian	Black	Latino	American Indian/Alaska Native
Alabama	150,238	69,535	1,209	66,850	20,907	4,905	Montana	17,868	12,767	0	0	1,589	5,053
Alaska	14,410	3,846	974	278	1,354	9,973	Nebraska	44,534	36,323	830	3,112	19,053	3,529
Arizona	192,520	126,687	2,251	18,522	117,134	30,590	Nevada	88,967	29,637	2,153	8,955	39,501	3,034
Arkansas	128,337	76,829	280	55,771	30,590	3,706	New Hampshire	12,114	10,434	895	536	1,095	0
California	688,636	383,337	29,641	63,619	559,163	19,685	New Jersey	122,304	56,483	2,694	28,583	71,481	710
Colorado	99,834	76,214	3,234	8,649	63,967	3,934	New Mexico	70,692	44,533	514	1,601	41,490	19,250
Connecticut	50,738	21,800	1,851	14,406	25,118	856	New York	380,747	178,443	19,639	89,305	136,364	6,973
Delaware	19,702	240	403	6,545	1,358	216	North Carolina	242,850	118,565	5,728	85,344	69,804	7,771
District of Columbia	8,685	6,203	119	7,944	3,635	0	North Dakota	13,149	5,438	147	3,128	772	5,101
Florida	373,710	208,817	4,740	137,933	138,567	2,605	Ohio	251,719	162,153	3,322	81,787	21,545	1,609
Georgia	261,997	111,646	4,185	115,671	65,743	3,764	Oklahoma	143,720	91,856	2,686	24,034	35,116	22,170
Hawaii	25,423	5,734	9,034	461	3,607	454	Oregon	69,346	55,399	692	2,304	36,936	7,672
Idaho	31,370	27,154	767	225	11,212	3,685	Pennsylvania	221,037	143,768	7,553	50,369	56,235	3,216
Illinois	265,228	132,269	7,170	85,341	90,312	2,763	Rhode Island	13,479	7,434	160	2,451	6,177	0
Indiana	182,766	128,699	3,753	41,354	32,866	3,237	South Carolina	140,126	56,722	103	75,722	21,381	2,006
lowa	65,437	51,891	1,173	10,308	13,593	604	South Dakota	23,386	12,997	474	209	3,191	9,959
Kansas	71,953	53,234	353	11,332	28,210	1,932	Tennessee	201,912	114,111	2,394	80,565	27,906	1,058
Kentucky	126,867	97,034	1,805	20,952	10,923	635	Texas	1,061,541	710,791	17,914	168,921	734,118	7,759
Louisiana	162,654	64,963	995	91,251	14,308	2,405	Utah	39,032	23,946	2,117	2,010	14,055	2,348
Maine	17,122	13,888	369	4,904	35	792	Vermont	3,038	3,250	0	0	0	0
Maryland	84,757	30,538	2,110	34,844	28,487	264	Virginia	143,653	79,491	1,123	51,526	34,872	2,227
Massachusetts	79,003	48,640	3,167	17,097	35,793	175	Washington	117,179	69,800	5,775	12,718	57,949	3,632
Michigan	218,853	131,754	2,548	76,932	19,721	4,738	West Virginia	44,144	40,180	0	2,855	1,785	477
Minnesota	81,346	39,532	3,905	25,283	12,837	6,123	Wisconsin	119,244	65,740	5,215	35,055	20,060	6,394
Mississippi	119,902	46,774	231	67,897	6,284	1,820	Wyoming	10,376	9,203	0	0	1,012	1,338
Missouri	155,915	104,712	237	42,840	15,354	2,126	United States	7,273,556	4,201,432	168,629	1,838,297	2,804,565	235,273

Notes: "Computer" refers to a laptop, desktop, or tablet computer. A value of "0" indicates one of the following: (1) the number of children within a given racial category was too small for the state to report data or (2) all children within a given racial category have adequate computer access. The American Community Survey does not provide further clarification about these values.

## Appendix B: Access to High-Speed Home Internet and Devices by Income, State Comparisons

TABLE B1: Percentage of Households Without High-Speed Home Internet Access by Household Income, State Comparisons

TABLE B1: Percentage of Households Without High-Speed Home Internet Access by Household Income, State Comparisons (continued)

State	All Households	Households with Annual Income Below \$25,000	Households with Annual Income Between \$25,000 and \$50,000	Households with Annual Income Between \$50,000 and \$75,000	Households with Annual Income Between \$75,000 and \$150,000	Households with Annual Income Above \$150,000	State	All Households	Households with Annual Income Below \$25,000	Households with Annual Income Between \$25,000 and \$50,000	Households with Annual Income Between \$50,000 and \$75,000	Households with Annual Income Between \$75,000 and \$150,000	Households with Annual Income Above \$150,000
Alabama	31.8%	54.4%	40.3%	27.2%	19.3%	14.9%	Montana	25.7%	49.1%	31.2%	18.8%	16.5%	27.6%
Alaska	29.5%	54.3%	46.0%	38.4%	23.0%	8.7%	Nebraska	21.0%	39.5%	30.7%	21.1%	14.5%	8.7%
Arizona	24.6%	47.2%	32.1%	25.8%	15.1%	9.4%	Nevada	21.7%	46.4%	26.8%	16.5%	15.0%	11.3%
Arkansas	39.0%	59.8%	44.5%	41.2%	28.4%	1.1%	New Hampshire	13.7%	34.0%	23.2%	14.5%	9.8%	7.0%
California	19.9%	40.1%	30.1%	23.4%	14.1%	7.7%	New Jersey	14.4%	30.1%	25.1%	19.0%	10.8%	6.3%
Colorado	17.2%	37.9%	27.6%	21.1%	12.1%	6.4%	New Mexico	34.0%	56.2%	38.2%	31.6%	17.2%	16.1%
Connecticut	14.2%	31.8%	26.2%	17.1%	9.6%	4.2%	New York	20.1%	37.8%	29.7%	22.1%	14.2%	8.2%
Delaware	18.4%	31.0%	27.7%	19.8%	14.5%	5.5%	North Carolina	22.7%	43.3%	31.0%	22.2%	12.7%	5.7%
District of Columbia	18.5%	44.7%	34.3%	16.7%	11.1%	4.7%	North Dakota	20.9%	54.9%	22.4%	19.9%	17.2%	15.2%
Florida	22.1%	40.8%	30.6%	20.2%	13.5%	8.2%	Ohio	21.4%	42.2%	28.0%	20.1%	14.0%	7.7%
Georgia	24.9%	46.7%	33.5%	26.3%	15.2%	8.0%	Oklahoma	34.6%	58.0%	39.4%	34.9%	24.1%	15.5%
	16.9%		23.6%	19.0%	13.2%	6.3%	Oregon	21.1%	39.6%	31.4%	21.8%	16.0%	9.2%
Hawaii	24.4%	46.2%					Pennsylvania	17.6%	36.5%	25.2%	19.4%	11.4%	7.0%
			27.2%	25.7%	17.8%	10.2%	Rhode Island	15.1%	38.6%	26.4%	15.2%	6.6%	4.1%
Illinois	21.8%	45.9%	31.9%	22.8%	14.8%	7.3%	South Carolina	26.5%	46.8%	35.1%	25.0%	15.6%	8.7%
Indiana	27.0%	45.1%	33.5%	27.0%	19.2%	14.8%	South Dakota	22.6%	41.9%	31.8%	25.2%	12.1%	12.0%
lowa	24.3%	50.6%	36.5%	26.4%	14.9%	9.8%	Tennessee	27.8%	47.4%	35.8%	27.1%	16.0%	11.7%
Kansas	22.9%	41.4%	32.4%	20.7%	16.9%	10.8%	Texas	28.6%	53.3%	38.7%	28.5%	18.7%	10.2%
Kentucky	27.7%	46.7%	35.1%	28.6%	16.5%	11.1%	Utah	19.0%	34.7%	30.7%	18.4%	14.1%	12.1%
Louisiana	30.6%	51.8%	36.8%	23.6%	19.8%	13.4%	Vermont	21.5%	34.9%	23.8%	27.9%	16.9%	16.6%
Maine	16.5%	34.6%	23.4%	15.5%	12.0%	5.6%	Virginia	20.8%	47.2%	33.5%	22.9%	15.1%	7.1%
Maryland	16.4%	41.9%	29.3%	21.8%	10.8%	7.0%	Washington	15.8%	33.5%	26.9%	19.1%	11.1%	5.9%
Massachusetts	13.2%	33.1%	23.5%	15.8%	9.6%	5.1%	West Virginia	25.8%	40.3%	27.4%	25.0%	19.7%	9.9%
Michigan	23.7%	45.3%	30.5%	22.0%	17.1%	8.7%	Wisconsin	21.6%	39.2%	29.0%	22.2%	16.2%	13.7%
Minnesota	19.0%	40.4%	29.2%	23.6%	14.6%	8.9%							
Mississippi	41.9%	60.6%	50.9%	35.0%	29.2%	19.3%	Wyoming	23.8%	35.3%	32.1%	19.8%	18.7%	22.9%
Missouri	27.8%	51.0%	37.5%	25.0%	19.4%	12.2%	United States	22.7%	44.5%	32.2%	23.6%	15.1%	8.4%

Notes: "High-speed home internet access" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). "Households" refers to households with one or more children age 17 years or younger.

TABLE B2: Nu Comparisons		ildren Without	High-Speed Hom	ne Internet Acces	s by Household I	ncome, State	TABLE B2: N Comparison	
State	All Income Levels	Household Income Below \$25,000	Household Income Between \$25,000 and \$50,000	Household Income Between \$50,000 and \$75,000	Household Income Between \$75,000 and \$150,000	Household Income Above \$150,000	State	
Alabama	332,223	123,381	84,727	46,966	60,797	16,353	Montana	
Alaska	52,552	9,542	12,916	12,144	15,109	2,841	Nebraska	
Arizona	415,234	118,511	119,369	78,434	77,003	21,918	Nevada	
Arkansas	296,639	90,311	80,288	57,163	58,232	10,644	New Hampshir	e
California	1,763,038	447,519	493,192	305,831	364,829	151,668	New Jersey	
Colorado	228,987	48,936	60,192	43,156	57,844	18,858	New Mexico	
Connecticut	110,176	30,287	32,722	16,225	21,290	9,652	New York	
Delaware	34,353	11,326	8,917	6,992	6,492	626	North Carolina	
District of Columbia	20,278	8,975	5,465	1,906	2,139	1,793	North Dakota	
Florida	859,018	256,332	266,750	142,713	151,289	41,934	Ohio	
Georgia	625,197	204,258	175,023	109,913	106,215	29,788	Oklahoma	
Hawaii	51,032	13,904	10,859	8,003	13,688	4,577	Oregon	
Idaho	110,504	26,180	28,437	25,778	24,770	5,339	Pennsylvania	
Illinois	635,855	187,693	163,698	104,988	136,022	43,454	Rhode Island	
Indiana	438,365	107,478	111,893	84,811	105,551	28,633	South Carolina	
lowa	184,572	43,483	51,837	36,002	42,804	10,446	South Dakota	
Kansas	171,750	37,331	51,372	28,166	43,758	11,123	Tennessee	
Kentucky	286,447	90,681	80,329	51,919	51,119	12,400	Texas	
Louisiana	318,352	125,350	81,541	39,518	55,794	16,149	Utah	
Maine	42,603	9,827	12,699	6,529	11,245	2,302	Vermont	
Maryland	220,714	51,013	55,973	37,786	48,339	27,604	Virginia	
Massachusetts	185,053	49,801	42,934	26,520	42,354	23,444	Washington	
Michigan	536,377	165,192	132,987	86,188	123,219	28,792	West Virginia	
Minnesota							Wisconsin	
minnesota	264,334	50,660	66,298	44,869	74,704	27,803	Wyoming	
Mississippi	290,739	105,824	77,686	46,497	49,776	10,957	United States	
Missouri	394,745	110,347	113,514	58,798	88,335	23,750		

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TABLE B2: Number of Children Without High-Speed Home Internet Access by Household Income, State
Comparisons (continued)

State	All Income Levels	Household Income Below \$25,000	Household Income Between \$25,000 and \$50,000	Household Income Between \$50,000 and \$75,000	Household Income Between \$75,000 and \$150,000	Household Income Above \$150,000
Montana	57,569	11,347	17,758	8,524	11,958	7,982
Nebraska	107,141	21,870	30,269	22,250	26,390	6,362
Nevada	147,923	44,475	40,327	20,185	34,169	8,767
New Hampshire	36,507	8,695	7,825	5,658	9,623	4,706
New Jersey	284,879	66,272	67,626	47,179	64,427	39,374
New Mexico	151,279	59,228	41,804	24,478	19,683	6,086
New York	833,365	249,847	207,883	124,900	172,981	77,753
North Carolina	525,858	179,876	156,963	83,035	87,948	18,036
North Dakota	37,255	7,370	5,097	7,795	12,084	4,910
Ohio	579,779	190,084	148,464	89,247	122,361	29,622
Oklahoma	345,997	102,408	91,492	65,947	70,088	16,062
Oregon	192,235	42,669	51,127	35,242	47,586	15,611
Pennsylvania	475,762	129,710	121,875	85,911	103,046	35,220
Rhode Island	32,396	11,875	9,197	5,140	4,474	1,710
South Carolina	283,081	93,819	80,829	49,606	48,187	10,640
South Dakota	48,879	11,186	16,062	9,344	9,642	2,646
Tennessee	434,739	141,523	124,847	78,846	70,625	18,899
Texas	2,104,514	661,552	604,418	336,194	388,869	113,481
Utah	181,255	24,714	46,868	34,116	56,350	19,207
Vermont	23,184	2,928	4,675	4,882	8,140	2,559
Virginia	393,850	97,907	104,831	62,793	95,109	33,210
Washington	280,297	57,029	77,283	55,135	67,056	23,794
West Virginia	96,684	32,917	22,451	17,242	20,862	3,211
Wisconsin	297,324	60,220	70,516	54,381	85,400	26,806
Wyoming	29,683	5,594	6,366	4,549	9,204	3,971
United States	16,850,575	4,839,258	4,578,473	2,840,392	3,478,979	1,113,473

Notes: "High-speed home internet access" refers to a wireline broadband internet subscription-high-speed internet service provided via cable, fiber, or digital subscriber line (DSL).

#### TABLE B3: Percentage of Households Without a Computer by Household Income, State Comparisons

State	All Households	Households with Annual Income Below \$25,000	Households with Annual Income Between \$25,000 and \$50,000	Households with Annual Income Between \$50,000 and \$75,000	Households with Annual Income Between \$75,000 and \$150,000	Households with Annual Income Above \$150,000
labama	14.2%	34.8%	17.7%	10.9%	4.3%	1.5%
aska	8.0%	24.7%	14.0%	10.6%	4.1%	0.3%
izona	11.3%	29.0%	16.2%	10.6%	4.6%	1.6%
kansas	17.0%	36.4%	22.8%	14.9%	5.4%	0.7%
lifornia	8.2%	23.4%	15.0%	8.3%	2.0%	1.1%
olorado	7.5%	26.7%	15.5%	8.9%	2.3%	0.8%
onnecticut	6.4%	21.1%	13.5%	7.7%	2.5%	0.4%
elaware	8.1%	34.2%	18.5%	5.1%	3.5%	1.8%
strict of lumbia	7.8%	20.1%	18.4%	6.8%	4.3%	0.3%
orida	9.5%	25.0%	14.4%	7.0%	3.2%	1.1%
orgia	11.0%	28.9%	17.0%	9.6%	3.3%	0.6%
waii	8.3%	33.0%	11.5%	9.5%	5.0%	1.3%
iho	6.9%	18.6%	13.3%	2.8%	2.3%	0.8%
nois	9.1%	28.8%	14.7%	8.4%	3.1%	0.8%
liana	11.3%	29.5%	16.2%	10.2%	3.8%	2.9%
wa	8.6%	26.2%	14.0%	11.1%	2.3%	1.2%
nsas	9.6%	31.0%	14.1%	9.9%	2.9%	0.7%
entucky	12.1%	33.2%	15.9%	8.4%	3.1%	1.1%
uisiana	15.5%	37.0%	20.5%	8.7%	3.6%	2.5%
aine	6.6%	15.0%	15.4%	3.3%	2.8%	1.2%
iryland	6.2%	24.3%	14.5%	7.8%	2.5%	0.7%
ssachusetts	5.7%	22.6%	11.8%	5.5%	2.6%	0.6%
chigan	9.5%	29.0%	15.7%	6.2%	2.5%	0.7%
nnesota	5.7%	29.5%	9.1%	4.4%	2.4%	1.0%
ssissippi	17.1%	37.7%	17.7%	11.4%	5.7%	3.9%
issouri	10.9%	31.7%	16.5%	7.7%	3.6%	1.5%
Jouri	10.3%	J1./ /o	10.3%	1.1/0	3.0%	1.3%

TABLE B3: Percentage of Households Without a Computer by Household Income, State Comparisons (continued)

State	All Households	Households with Annual Income Below \$25,000	Households with Annual Income Between \$25,000 and \$50,000	Households with Annual Income Between \$50,000 and \$75,000	Households with Annual Income Between \$75,000 and \$150,000	Households with Annual Income Above \$150,000
Montana	8.0%	23.9%	14.8%	3.6%	1.9%	3.2%
Nebraska	8.7%	31.2%	11.0%	7.4%	4.5%	0.6%
Nevada	8.8%	24.0%	14.5%	6.7%	13.5%	6.8%
New Hampshire	4.5%	19.6%	10.7%	5.7%	1.3%	0.0%
New Jersey	6.1%	19.8%	15.3%	6.7%	3.0%	0.6%
New Mexico	15.9%	32.4%	19.1%	11.4%	5.5%	1.3%
New York	9.1%	25.1%	15.7%	8.0%	4.0%	1.2%
North Carolina	10.4%	27.9%	16.2%	7.8%	2.2%	0.2%
North Dakota	7.4%	34.3%	9.0%	7.8%	3.2%	3.7%
Ohio	9.9%	29.2%	14.2%	7.4%	3.0%	1.0%
Oklahoma	14.3%	34.1%	18.0%	12.9%	5.6%	1.0%
Oregon	7.5%	25.2%	12.7%	9.8%	1.8%	0.2%
Pennsylvania	8.1%	24.2%	14.1%	7.4%	3.0%	1.4%
Rhode Island	6.2%	21.2%	11.9%	2.3%	3.0%	0.0%
South Carolina	13.1%	34.5%	17.7%	8.9%	3.5%	1.3%
South Dakota	10.6%	34.9%	18.9%	4.9%	3.4%	0.0%
Tennessee	13.0%	31.7%	18.0%	9.0%	4.5%	1.3%
Texas	14.2%	37.5%	21.2%	11.6%	5.5%	1.4%
Utah	4.1%	13.0%	7.9%	5.9%	1.5%	0.5%
Vermont	3.0%	13.3%	3.9%	3.3%	1.2%	0.0%
Virginia	7.5%	29.2%	13.5%	8.3%	2.6%	0.4%
Washington	6.6%	21.1%	12.5%	7.5%	3.6%	0.8%
West Virginia	11.6%	28.8%	12.4%	9.9%	3.3%	0.4%
Wisconsin	8.6%	25.6%	15.3%	9.4%	3.3%	1.2%
Wyoming	8.3%	26.6%	11.7%	9.0%	3.6%	0.0%
United States	9.8%	28.7%	15.9%	8.6%	3.5%	1.7%

Notes: "Computer" refers to a laptop, desktop, or tablet computer. "Households" refers to households with one or more children age 17 years or younger.

TABLE B4: Number of Children Without a Computer by Household Income, State Comparisons									
itate	All Income Levels	Household Income Below \$25,000	Household Income Between \$25,000 and \$50,000	Household Income Between \$50,000 and \$75,000	Household Income Between \$75,000 and \$150,000	Household Income Above \$150,000			
labama	150,238	78,983	37,211	18,821	13,573	1,649			
laska	14,410	4,338	3,929	3,351	2,693	98			
Arizona	192,520	72,873	60,318	32,198	23,414	3,717			
Arkansas	128,337	55,015	41,107	20,679	11,074	463			
California	688,636	260,971	245,925	108,460	51,595	21,686			
Colorado	99,834	34,498	33,762	18,246	10,983	2,345			
Connecticut	50,738	20,096	16,892	7,307	5,525	918			
Delaware	19,702	9,515	5,600	1,894	2,144	549			
District of Columbia	8,685	4,037	2,928	775	831	114			
lorida	373,710	157,156	125,690	49,379	35,839	5,647			
Georgia	261,997	117,913	82,973	37,477	21,544	2,090			
lawaii	25,423	9,926	5,293	3,995	5,268	941			
daho	31,370	11,052	13,891	2,808	3,198	419			
llinois	265,228	117,684	75,479	38,760	28,515	4,790			
ndiana	182,766	70,226	54,082	31,995	20,844	5,618			
owa	65,437	22,517	19,899	15,128	6,612	1,282			
(ansas	71,953	27,928	22,331	13,453	7,518	722			
(entucky	126,867	64,436	36,350	15,273	9,576	1,233			
ouisiana.	162,654	89,590	45,371	14,542	10,142	3,010			
Maine	17,122	4,266	8,352	1,391	2,623	490			
Maryland	84,757	29,588	27,724	13,506	11,173	2,766			
Aassachusetts	79,003	33,995	21,524	9,205	11,514	2,765			
Aichigan	218,853	105,703	68,553	24,301	17,977	2,319			
Ainnesota	81,346	36,976	20,627	8,349	12,268	3,126			
Aississippi	119,902	65,823	27,003	15,135	9,722	2,219			
Aissouri	155,915	68,546	49,909	18,117	16,431	2,911			

TABLE B4: Number of Children Without a Computer by Household Income, State Comparisons
(continued)

State	All Income Levels	Household Income Below \$25,000	Household Income Between \$25,000 and \$50,000	Household Income Between \$50,000 and \$75,000	Household Income Between \$75,000 and \$150,000	Household Income Above \$150,000
Montana	17,868	5,521	8,411	1,634	1,377	924
Nebraska	44,534	17,285	10,841	7,805	8,167	436
Nevada	88,967	22,990	21,825	8,175	30,694	5,284
New Hampshire	12,114	5,007	3,613	2,217	1,277	0
New Jersey	122,304	43,464	40,968	16,510	17,587	3,775
New Mexico	70,692	34,157	20,923	8,834	6,287	491
New York	380,747	165,716	109,994	45,145	48,581	11,310
North Carolina	242,850	115,857	81,964	29,202	15,196	632
North Dakota	13,149	4,604	2,044	3,057	2,248	1,196
Ohio	251,719	122,723	70,197	30,686	24,518	3,595
Oklahoma	143,720	60,243	41,776	24,357	16,306	1,037
Oregon	69,346	27,155	20,658	15,829	5,363	341
Pennsylvania	221,037	86,018	68,071	32,781	27,132	7,035
Rhode Island	13,479	6,521	4,143	777	2,038	0
South Carolina	140,126	69,209	40,815	17,681	10,828	1,593
South Dakota	23,386	9,328	9,539	1,815	2,705	0
Tennessee	201,912	92,856	61,769	25,736	19,503	2,048
Texas	1,061,541	465,344	331,325	136,841	114,135	15,531
Utah	39,032	9,255	12,075	10,910	5,999	793
Vermont	3,038	1,116	766	577	579	0
Virginia	143,653	60,508	42,197	22,732	16,352	1,863
Washington	117,179	35,943	35,759	21,054	21,222	3,201
West Virginia	44,144	23,534	10,152	6,832	3,497	129
Wisconsin	119,244	39,285	37,174	23,066	17,368	2,351
Wyoming	10,376	4,217	2,318	2,067	1,774	0
United States	7,273,556	3,101,507	2,242,040	1,020,864	773,328	137,453

Notes: "Computer" refers to a laptop, desktop, or tablet computer. "Households" refers to households with one or more children age 17 years or younger.

## Appendix C: Access to High-Speed Home Internet and Devices by Location, State Comparisons

TABLE C1: Percentage c Comparisons	of Households Without H	igh-Speed Home Interne	t Access by Location, State	TABLE C1: Percentage of Comparisons (continued		I-Speed Home Internet Act	cess by Location, State
State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations	State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations
Alabama	31.8%	46.3%	29.6%	Montana	25.7%	26.4%	24.9%
Alaska	29.5%	57.9%	24.4%	Nebraska	21.0%	29.6%	16.6%
Arizona	24.6%	51.6%	23.5%	Nevada	21.7%	24.9%	21.3%
Arkansas	39.0%	45.9%	35.2%	New Hampshire	13.7%	15.5%	12.8%
California	19.9%	31.3%	19.7%	New Jersey	14.4%	0.0%	14.4%
Colorado	17.2%	35.7%	14.9%	New Mexico	34.0%	41.1%	30.1%
Connecticut	14.2%	14.1%	14.2%	New York	20.1%	28.3%	19.5%
Delaware	18.4%	0.0%	18.4%	North Carolina	22.7%	30.5%	20.9%
District of Columbia	18.5%	0.0%	18.5%	North Dakota	20.9%	19.8%	21.7%
Florida	22.1%	38.5%	21.6%	Ohio	21.4%	32.3%	18.5%
Georgia	24.9%	43.6%	21.2%	Oklahoma	34.6%	46.7%	27.4%
Hawaii	16.9%	38.6%	13.4%	Oregon	21.1%	25.7%	20.1%
Idaho	24.4%	33.3%	20.0%	Pennsylvania	17.6%	25.9%	16.5%
Illinois	21.8%	30.6%	20.6%	Rhode Island	15.1%	0.0%	15.1%
Indiana	27.0%	38.5%	23.7%	South Carolina	26.5%	44.8%	24.4%
lowa	24.3%	31.4%	20.4%	South Dakota	22.6%	26.1%	19.7%
Kansas	22.9%	28.2%	20.5%	Tennessee	27.8%	36.3%	25.9%
Kentucky	27.7%	31.8%	25.0%	Texas	28.6%	46.3%	26.8%
Louisiana	30.6%	60.7%	26.7%	Utah	19.0%	25.8%	18.3%
Maine	16.5%	22.7%	12.4%	Vermont	21.5%	24.3%	16.0%
Maryland	16.4%	35.1%	15.8%	Virginia	20.8%	37.3%	18.8%
Massachusetts	13.2%	21.8%	13.1%	Washington	15.8%	26.3%	15.0%
Michigan	23.7%	37.6%	20.8%	West Virginia	25.8%	30.3%	23.7%
Minnesota	19.0%	29.0%	16.7%	Wisconsin	21.6%	27.1%	19.4%
Mississippi	41.9%	49.1%	33.4%	Wyoming	23.8%	28.6%	17.0%
Missouri	27.8%	38.0%	24.9%	United States	22.7%	36.2%	20.9%

Notes: "Home internet access" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). "Households" refers to households with one or more children age 17 years or younger. Following the U.S. Census Bureau's practice, this analysis defines "metropolitan" areas as urbanized areas of 50,000 or more people and urban clusters of at least 2,500 people but less than 50,000. Remaining areas are nonmetropolitan. The American Community Survey (ACS) does not use the term "rural" in characterizing geographies. Values for Delaware, the District of Columbia, New Jersey, and Rhode Island appear as "0" because these jurisdictions do not have a geographic area that meets the ACS definition of nonmetropolitan area.

# TABLE C2: Number of Children Without High-Speed Home Internet Access by Location, State Comparisons

# TABLE C2: Number of Children Without High-Speed Home Internet Access by Location, State Comparisons (continued)

State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations	State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations
Alabama	332,223	63,411	266,561	Montana	57,569	32,260	26,063
Alaska	52,552	17,626	35,047	Nebraska	107,141	51,395	56,565
Arizona	415,234	37,380	376,285	Nevada	147,923	19,723	126,632
Arkansas	296,639	125,809	163,860	New Hampshire	36,507	13,947	22,318
California	1,763,038	47,243	1,681,551	New Jersey	284,879	0	282,764
Colorado	228,987	55,003	173,968	New Mexico	151,279	68,771	83,533
Connecticut	110,176	4,917	104,136	New York	833,365	79,611	739,187
Delaware	34,353	0	19,686	North Carolina	525,858	133,319	389,912
District of Columbia	20,278	0	34,353	North Dakota	37,255	14,754	22,544
Florida	859,018	44,001	806,742	Ohio	579,779	146,090	412,514
Georgia	625,197	181,003	431,737	Oklahoma	345,997	177,272	168,705
Hawaii	51,032	17,890	33,556	Oregon	192,235	42,392	147,355
Idaho	110,504	52,457	59,685	Pennsylvania	475,762	79,822	392,014
Illinois	635,855	105,813	525,586	Rhode Island	32,396	0	31,539
Indiana	438,365	141,212	299,279	South Carolina	283,081	51,077	230,724
lowa	184,572	86,891	98,432	South Dakota	48,879	25,266	23,510
Kansas	171,750	66,021	105,423	Tennessee	434,739	97,643	330,476
Kentucky	286,447	130,008	154,135	Texas	2,104,514	330,735	1,734,353
Louisiana	318,352	73,704	243,318	Utah	181,255	25,504	159,230
Maine	42,603	24,004	19,035	Vermont	23,184	17,875	5,720
Maryland	220,714	14,337	203,757	Virginia	393,850	73,595	318,806
Massachusetts	185,053	4,003	181,161	Washington	280,297	34,348	242,899
Michigan	536,377	147,373	386,256	West Virginia	96,684	37,112	58,818
Minnesota	264,334	79,087	182,209	Wisconsin	297,324	45,246	231,680
Mississippi	290,739	180,895	106,718	Wyoming	29,683	21,600	8,464
Missouri	394,745	119,480	271,519	United States	16,850,575	3,438,922	13,210,323

Notes: "Home internet access" refers to a wireline broadband internet subscription—high-speed internet service provided via cable, fiber, or digital subscriber line (DSL). Following the U.S. Census Bureau's practice, this analysis defines "metropolitan" areas as urbanized areas of 50,000 or more people and urban clusters of at least 2,500 people but less than 50,000. Remaining areas are nonmetropolitan. The American Community Survey (ACS) does not use the term "rural" in characterizing geographies. Values for Delaware, the District of Columbia, New Jersey, and Rhode Island appear as "0" because these jurisdictions do not have a geographic area that meets the ACS definition of nonmetropolitan area.

TABLE C3: Percentage	of Households Without	a Computer by Location,	State Comparisons		e of Households Without a	Computer by Location, S	itate Comparisons
State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations	(continued) State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations
Alabama	14.2%	18.7%	13.6%	<b>N</b> . 1	0.0%		7.0%
Alaska	8.0%	33.5%	25.4%	Montana	8.0%	8.2%	7.8%
Arizona	11.3%	29.3%	10.6%	Nebraska	8.7%	10.3%	8.0%
Arkansas	17.0%	19.2%	15.8%	Nevada	8.8%	6.6%	9.1%
California	8.2%	10.4%	8.2%	New Hampshire	4.5%	5.4%	4.0%
Colorado	7.5%	11.9%	6.9%	New Jersey	6.1%	0.0%	6.1%
Connecticut	6.4%	5.6%	6.5%	New Mexico	15.9%	19.6%	13.8%
Delaware	8.1%	0.0%	8.1%	New York	9.1%	9.9%	9.1%
District of Columbia	7.8%	0.0%	7.8%	North Carolina	10.4%	13.5%	9.7%
Florida	9.5%	23.0%	9.1%	North Dakota	7.4%	8.3%	6.7%
Georgia	11.0%	19.0%	9.4%	Ohio	9.9%	11.2%	9.6%
Hawaii	8.3%	20.3%	6.4%	Oklahoma	14.3%	16.6%	12.8%
		8.2%	6.3%	Oregon	7.5%	9.1%	7.2%
Idaho	6.9%			Pennsylvania	8.1%	12.4%	7.6%
Illinois	9.1%	13.1%	8.5%	Rhode Island	6.2%	0.0%	6.2%
Indiana	11.3%	14.0%	10.5%	South Carolina	13.1%	15.6%	12.8%
lowa	8.6%	10.3%	7.6%	South Dakota	10.6%	16.9%	5.5%
Kansas	9.6%	11.2%	8.8%	Tennessee	13.0%	14.6%	12.6%
Kentucky	12.1%	14.2%	10.8%	Texas	14.2%	21.1%	13.5%
Louisiana	15.5%	28.0%	13.9%	Utah	4.1%	6.5%	3.9%
Maine	6.6%	6.9%	6.4%	Vermont	3.0%	2.9%	3.1%
Maryland	6.2%	8.7%	6.1%	Virginia	7.5%	13.9%	6.8%
Massachusetts	5.7%	5.0%	5.7%	Washington	6.6%	7.9%	6.5%
Michigan	9.5%	11.3%	9.2%	West Virginia	11.6%	15.1%	9.9%
Minnesota	5.7%	9.4%	4.8%	Wisconsin	8.6%	9.5%	8.5%
Mississippi	17.1%	20.0%	13.6%	Wyoming	8.3%	8.5%	8.0%
Missouri	10.9%	14.1%	9.9%	United States	9.8%	14.2%	9.3%

Notes: "Computer" refers to a laptop, desktop, or tablet computer. "Households" refers to households with one or more children age 17 years or younger. Following the U.S. Census Bureau's practice, this analysis defines "metropolitan" areas as urbanized areas of 50,000 or more people and urban clusters of at least 2,500 people but less than 50,000. Remaining areas are nonmetropolitan. The American Community Survey (ACS) does not use the term "rural" in characterizing geographics. Values for Delaware, the District of Columbia, New Jersey, and Rhode Island appear as "0" because these jurisdictions do not have a geographic area that meets the ACS definition of nonmetropolitan area.

TABLE C4: Number of C	Children Without a Compute	er by Location, State Compa	risons	TABLE C4: Number of Child
State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations	State
Alabama	150,238	25,611	122,474	Montana
Alaska	14,410	6,515	8,043	Nebraska
Arizona	192,520	21,225	169,729	Nevada
Arkansas	128,337	52,626	73,551	New Hampshire
California	688,636	15,697	699,935	New Jersey
Colorado	99,834	18,334	80,563	New Mexico
Connecticut	50,738	1,953	47,668	New York
Delaware	19,702	0	8,685	North Carolina
District of Columbia	8,685	0	19,702	North Dakota
Florida	373,710	26,286	339,877	Ohio
Georgia	261,997	73,603	178,630	Oklahoma
lawaii	25,423	9,399	16,027	Oregon
daho	31,370	12,917	18,801	Pennsylvania
llinois	265,228	45,299	216,868	Rhode Island
ndiana	182,766	51,350	132,592	South Carolina
owa	65,437	28,502	36,671	South Dakota
Kansas	71,953	26,221	45,255	Tennessee
Kentucky	126,867	58,054	66,586	Texas
Louisiana	162,654	33,998	126,671	Utah
Maine	17,122	7,296	9,825	Vermont
Maryland	84,757	3,554	78,666	Virginia
Massachusetts	79,003	918	78,826	Washington
Michigan	218,853	44,290	170,844	West Virginia
Minnesota	81,346	25,635	52,371	Wisconsin
Mississippi	119,902	73,684	43,454	Wyoming
Missouri	155,915	44,334	107,953	United States

#### TABLE C4: Number of Children Without a Computer by Location, State Comparisons (continued)

State	All Locations	Nonmetropolitan "Rural" Locations	Metropolitan Locations	
Montana	17,868	10,020	8,164	
Nebraska	44,534	17,884	27,260	
Nevada	88,967	5,228	54,101	
New Hampshire	12,114	4,859	6,974	
New Jersey	122,304	0	122,304	
New Mexico	70,692	32,796	38,298	
New York	380,747	27,850	344,954	
North Carolina	242,850	59,010	180,964	
North Dakota	13,149	6,185	6,961	
Ohio	251,719	47,269	199,748	
Oklahoma	143,720	63,013	78,811	
Oregon	69,346	15,010	52,784	
Pennsylvania	221,037	38,216	180,564	
Rhode Island	13,479	0	13,479	
South Carolina	140,126	17,786	121,036	
South Dakota	23,386	16,360	6,564	
Tennessee	201,912	39,272	160,772	
Texas	1,061,541	150,724	873,648	
Utah	39,032	6,425	33,934	
Vermont	3,038	2,133	1,108	
Virginia	143,653	42,816	189,927	
Washington	117,179	10,317	105,256	
West Virginia	44,144	18,495	24,569	
Wisconsin	119,244	15,861	101,509	
Wyoming	10,376	6,420	3,983	
United States	7,273,556	1,361,251	5,887,941	

Notes: "Computer" refers to a laptop, desktop, or tablet computer. Following the U.S. Census Bureau's practice, this analysis defines "metropolitan" areas as urbanized areas of 50,000 or more people and urban clusters of at least 2,500 people but less than 50,000. Remaining areas are nonmetropolitan. The American Community Survey (ACS) does not use the term "rural" in characterizing geographies. Values for Delaware, the District of Columbia, New Jersey, and Rhode Island appear as "0" because these jurisdictions do not have a geographic area that meets the ACS definition of nonmetropolitan area.