



Kids Learn!

A Research-Based Resource to Support
Summer Learning at Home for Students in
Preschool through High School

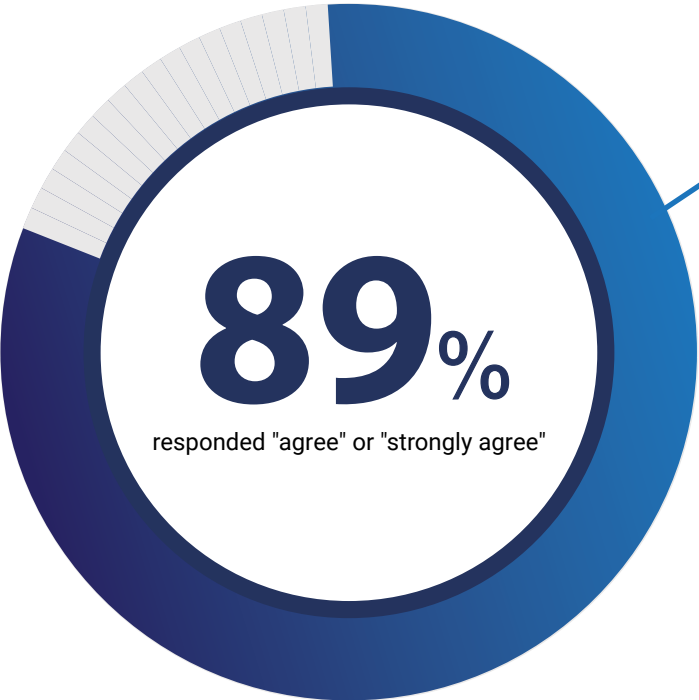
Introduction

Kids Learn! was designed to bridge the away-from-school gap in instruction with activities that are based on grade-level standards, as well as best practices in education and learning. *Kids Learn!* includes student-directed activities in mathematics, reading, and writing. There are mathematical skills review, computational practice, social and emotional wellness components, critical and creative thinking exercises, and reading and writing practice.

While summer school programs often focus on intervention, “it is likely that all students will benefit from summer enrichment, whether the enrichment is provided through everyday family activities or structured programming” (Sandberg Patton and Reschly 2013). Educators and families have long recognized the need for continued learning for all students during summer breaks.



“The *Kids Learn!* books were easy to understand and helped me guide my child to complete the activities. The activities were at an appropriate level of difficulty for my child.”



Results from 2022 survey of families in Lodi Unified School District who received *Kids Learn!* activity books for their students in grades TK–6.

The Impact of Interrupted Learning

The “summer slide” in student learning may seem to impact student performance primarily in the fall. In actuality, the long summer school break “can result in a one-month loss of academic skills acquired during the school year” (Pennell 2020). Research shows that “children who do not participate in learning experiences over the summer year after year have an academic achievement gap that grows throughout the elementary and middle school years” (Caputo and Estrovitz 2017). The interruption in learning during the summer has a tremendous effect on students in grades K–3. Studies conducted by Megan Kuhfeld (2019) revealed that 70–78% of elementary students lost ground in math during the summer, and 62–73% of elementary students lost ground in reading. The evidence is clear with older students, as well. Kuhfeld’s research showed that 84% of students experienced a drop in math skills between elementary school and middle school (2019). The average reduction in mathematical computation skills over summer break is approximately 2.6 months of grade-level equivalency (Cooper et al. 1996). Clearly, students’ mathematical and literacy skills suffer when learning is interrupted.

Because foundational skills are developed in these years, gaps in understanding can have a far-reaching impact in later years. Loss of instruction and “summer setbacks are particularly worrisome because the early grades are the foundation for the achievement, work habits, and perceptions about self-confidence and schooling that impact performance for years to come” (Boulay and McChesney 2021).

It is important to note that this consequence is “cumulative in nature, [as] summer slide can further contribute to a widening academic achievement gap between low and high achieving readers” (Pennell 2020). The impact of this deficit stretches far beyond academic achievement in students’ K–12 schooling; Ritchie and Bates (2013) found that mathematics and reading achievement for children at age seven correlates to a higher socio-economic status when they reach their 40s. It is critical for schools and districts to address the interruption in learning that occurs over the summer, not only to increase achievement for students in their schools, but also to ensure the success of future adults in their communities.



It is also clear that learning loss in the summer disproportionately affects lower-income students. English learners and historically marginalized students are particularly impacted. Albee et al. (2019) report that “according to Allington et al. (2010) more than 80% of the rich/poor reading gap accumulates during the summer break from continuous reading instruction” (291). Children from affluent families tend to experience lower rates of learning loss and may even make some modest gains (Boulay and McChesney 2021). Some of the reasons for the discrepancy include the fact that affluent children are more likely to interact with adults who encourage continued learning or to attend summer programs or camps (Boulay and McChesney 2021). Children who do not have access to these resources are at a distinct disadvantage. Schools can help diminish this gap by supporting and encouraging continued learning over summer breaks. Children benefit from added support as presented by research from Karl Alexander, professor emeritus at Johns Hopkins University who reports that “children in poverty [keep] up during the school year [and then fall] behind in the summer” (Boulay and McChesney 2021). Schools can help reduce the impact of interrupted learning by providing resources for students who might otherwise not have access to them.

The Impact of the COVID-19 Pandemic on Learning and Retention

Beginning in March of 2020, when the COVID-19 pandemic resulted in a shift to remote instruction, learning gaps related to “structural inequities that have kept children of color and those in poverty further behind than their peers from white and affluent families” were starkly highlighted (Boulay and McChesney 2021). Students from more affluent families typically had access to resources that supported remote learning such as devices, reliable internet access, and a dedicated space to complete schoolwork. Therefore, students in less affluent families faced even more pronounced challenges as they tried to access and navigate distance learning for far longer than anyone anticipated.



As a result of remote learning, students of color experienced more pronounced stalls in learning which expanded an already prominent opportunity gap. In the area of mathematics, the gap is staggering. Dorn et al. (2020) explain that “the cumulative learning loss could be substantial, especially in mathematics—with students on average likely to lose five to nine months of learning by the end of this school year.” While white students may be four to eight months behind, the numbers for students of color could be closer to six to 12 months (Dorn et al. 2020).



Research to Practice

Kids Learn! activity books provide a robust and user-friendly resource for students and families. These books engage students in continued learning and growth over summer break through nine weeks of activities that support mastery of skills and cross-curricular connections. The standards-based reading, writing, and mathematics activities both reinforce learning from the recently completed school year and prepare students for the next grade level.

Week 6: Practice O, P, and Q
Trace and write the letters. O, P, Q, o, p, q.

Week 6: I'm Happy
Draw what makes you happy. Share your drawing.

Week 6: Perimeter
The perimeter is the outside measurement of a shape. To find the perimeter, add all four sides together.
1 in. 5 in. Perimeter = 12 inches
Directions: Find the perimeter for each shape.
1. 3 in. 4 in. Perimeter = _____ inches
2. 2 in. 10 in. Perimeter = _____ inches

Collecting Box Coupons
Directions: Students at Newhall School have been collecting box coupons for breakfast cereals to get computer equipment for their school. Students in a class made a graph to show the number of box coupons they had collected.
Room 8: Bar graph showing coupons collected by Carter, Brown, Jones, Hill, Taylor, and Davis.
Room 9: Bar graph showing coupons collected by Allen, Green, Black, White, Adams, and Gray.
Room 10: Bar graph showing coupons collected by Ford, Johnson, Clark, Miller, and Evans.
Room 11: Dot plot showing coupons collected by Kim, Lee, Park, Kim, Allen, and Moore.

The History of Death Valley
Directions: Read the text. Then, number the sentences below in the correct order from 1-5.
American Indians came to Death Valley long ago. But they did not live there all year. Sometimes they camped and hunted in other places. Sometimes they did not go to Death Valley for many years. Today you can find things they left behind. You might find arrowheads and spearheads. You might find bits of pottery, too.
In 1849, other people came to Death Valley. They were looking for gold. They did not plan well for their trip. It was very hot and dry. Many people died in Death Valley. That is how it got its name.
More people came to Death Valley in 1881. They came to mine borax. Borax is a chemical. It is used for cleaning and to make some products. People picked up or dug borax pieces from the ground.
Scotty's Castle is a famous place in Death Valley. It is a ranch house. The house was built in the 1920s by Albert Johnson. It was named for Walter Scott. He was a miner who was Johnson's friend.
Death Valley is famous for its beauty. People wanted it to stay beautiful and natural. It was made a national monument in 1933.
____ Death Valley was made a national monument.
____ People came to Death Valley to mine gold.
____ Scotty's Castle was built.
____ American Indians came to Death Valley.
____ People came to Death Valley to mine borax.

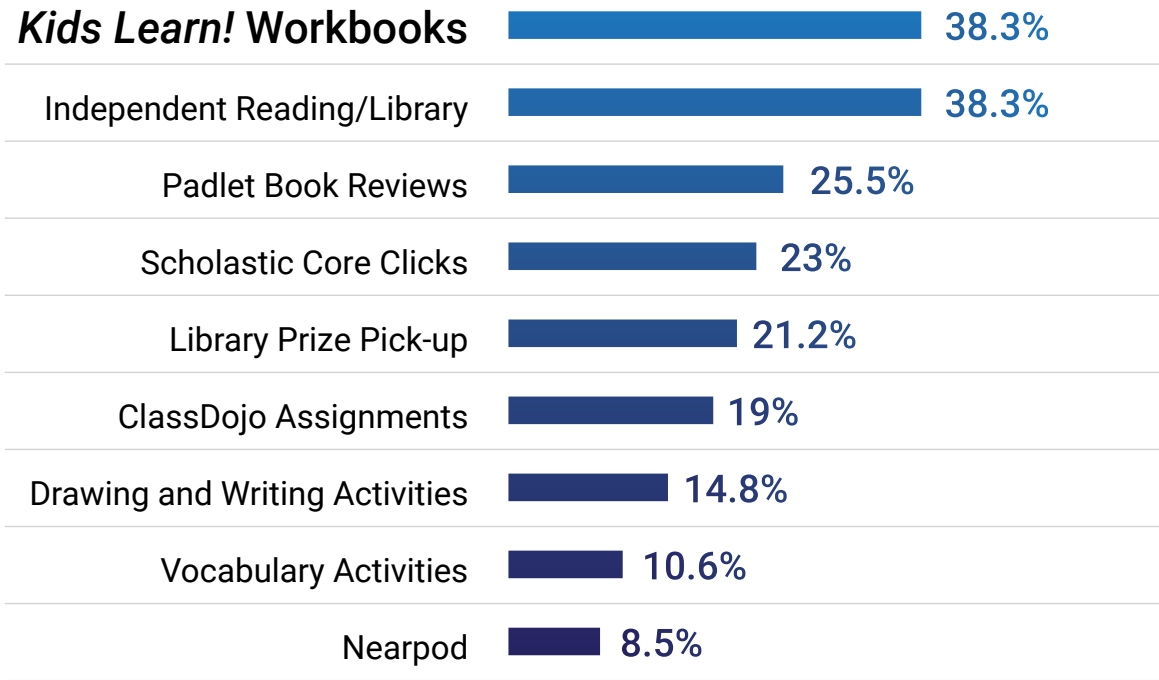
Week 4: Time Management
Directions: Using your time well can be tricky. It can be hard to get things done when you are distracted. Keeping track of how you use your time can help you stay on task. Complete the table and answer the questions next time you have an important task to do.
Common Distractions: feeling overwhelmed, games, hunger, off-topic ideas, online videos, social media, texting, tiredness.
Table with columns: Task, Distraction, Add a tally mark every time you get distracted.
1. What was your biggest distraction?
2. How many times did you get distracted?
3. How much longer do you think this task took because of your distractions?
4. How do you feel about your distractions?

Case Study of *Kids Learn!*

In 2021, a virtual summer reading incentive program was designed by the staff at the Hazel Miller Croy Reading Center at California State University, Fullerton that allowed for student choice of literacy activities for point-earning purposes. Seventy-one students from grades 1 through 10 were enrolled, and 47 were active participants.

Students were invited to attend six weekly one-hour Zoom class sessions for book-related discussions and direct instruction on various reading strategies. They were encouraged to complete multiple independent activities between sessions. *Kids Learn!* activities and independent reading (measured by participation in the library independent reading program) were the most popular student choices for independent work. Each was selected by 18 out of 47 students. *Kids Learn!* activities had a higher number of overall tasks completed, making them the most popular option of all independent choices offered. Having a physical book with clear directions and well-defined tasks can account for some of the popularity. Using physical books seemed to be favored overall since the library reading logs were also highly rated.

Activities chosen and completed by students



Supporting Literacy Skills

In their book *What the Science of Reading Says about Reading Comprehension and Content Knowledge*, Jennifer Jump and Kathleen Kopp identify four key aspects of literacy development: word recognition, reading comprehension, content knowledge, and writing (2022). A student's success in becoming a fluent reader is grounded in the explicit instruction they receive in these areas. But collaborative and independent practice of reading skills is crucial as well. Fluency experts Timothy Rasinski and Lorraine Griffith note that students "become fluent in reading by practicing" (2011, 18). The same is true of writing. The International Literacy Association states, "As students write, they learn by doing. They try out different forms of writing, apply different strategies and approaches for producing text, and gain fluency with basic writing skills such as handwriting, spelling, and sentence construction" (2020, 3). The importance of the connection between reading and writing, and how this connection improves both skill sets, has been supported through research by Sarah Whyte (1985).



Research to Practice

Kids Learn! offers many opportunities to make that all-important reading-writing connection. The reading selections are written at the grade level for the grade students recently completed, helping to maintain and reinforce recent learning. Students may be asked to read a passage or a book and write a directed/constructed response to it, or they may be required to follow written directions to complete an activity. *Kids Learn!* also places a strong focus on practicing and reinforcing basic skills in word recognition, punctuation, and parts of speech.

The image displays three sample pages from the *Kids Learn!* curriculum, each featuring a different reading activity and associated questions.

- Page 60 (Week 5): "Better Tunes for a Better Life"**
 - Directions:** Read the text, and answer the questions.
 - Text:** It might get time to play some music and live a better life. Music is not just background noise. The effects of music have been scientifically proven in many ways. Calmer days are waiting at the end of your favorite songs. Music brings a better life in many ways—big and small. When listening to music, your body releases dopamine. This chemical boosts your mood and eases anxious feelings. It can reduce your blood pressure and heart rate at the same time. Music you enjoy and seeing how it affects your mood and stress levels. Music therapy can help people in many situations. Adults with Alzheimer's disease and stroke survivors showed stronger reasoning and memory while listening to music. Playing music prior to a medical procedure and during recovery can reduce pain. Premature infants showed better feeding patterns and improved vital when lullabies or other music was played for them. Children with autism were more attentive and showed better social skills.
 - Activity:** The next time you feel the stress of daily tasks or new obstacles, create a playlist to see whatever might come next. Use your whole body to thank you.
 - Questions:**
 - Whom does the text not mention as a group who can benefit from music as therapy?
 - people with Alzheimer's disease
 - people with lullabies
 - children with autism
 - stroke survivors
 - How does music affect the chemicals and hormones in your body? Use evidence from the text to support your answer.
 - What might be another condition that could benefit from using music as therapy? Explain your reasoning.
- Page 64 (Week 7): "Another Fable Message"**
 - Directions:** A moral is the lesson taught by a fable. Read the text. Think about its moral. Then, answer the questions.
 - Text:** **The Town Mouse and the Country Mouse**
A town mouse decided to visit his cousin in the country. The country mouse had a simple life. He fed his town cousin beans, bacon, cheese, and a bit of bread. The town mouse didn't understand how a mouse could get by on such plain food. "You should come and live with me," the town mouse said. "In my home, there is grand food from a grand table." The country mouse went to visit. Indeed, there were wonderful foods left on the table. As the country mouse ate some cake, he saw a huge cat leaping across the table. "Run!" the town mouse yelled. They ran behind the wall where the town mouse lived. The country mouse packed his things. "What is the problem?" the town mouse asked. "You just have to be quick. That cat will never catch you." The country mouse replied, "No thanks!"
 - Questions:**
 - How are the mice different?
 - _____
 - _____
 - What is the moral of the story?
 - You can't trust some friends even if you like them.
 - It's better to eat beans and bacon in peace than cake in fear.
 - It's better to live in the city than in the country.
- Page 65 (Week 6): "Who Am I?"**
 - Directions:** Listen to an adult read the poem. Then, talk about the questions.
 - Poem:**

I fly in the yard on a bright summer day.
The people outside stay out of my way.
They are yelling and running and waving their arms.
I wish that they knew I mean no harm.
If only they looked closely at me.
They would know I'm just a sweet-as-honey bumblebee.
 - Questions:**
 - Who is the character in the poem?
 - Where does the poem take place?
 - Why do you think people in the poem yell and run away from the bee?

Supporting Mathematical Skills

Often when discussing summer learning loss, the focus is primarily on reading and literacy skills. While these are certainly important, mathematical performance is also impacted by summer slide. In fact, “on average, students lose about two months of math skills every summer” and this loss can be seen most significantly in younger students (Boulay and McChesney 2021). One of the reasons behind this trend is that reading is often practiced at home while mathematics is typically only practiced in school (Boulay and McChesney 2021). Additionally, students are especially susceptible to losing facts and procedural skills during instructional breaks (Cooper and Sweller 1987). To prevent and slow this reduction in learning, students must have access to grade-appropriate activities and practice materials during their away-from-school time.



Research to Practice

The *Kids Learn!* series includes not only materials and activities that support literacy, reading development, and writing, but also numeracy and mathematics skills. Sound educational practices are evident in the mathematics practice activities. For instance, The Institute of Educational Sciences advocates helping students understand why procedures for computations make sense by using visual representations and opportunities for estimation to predict answers (Siegler et al. 2010). Both of these strategies are used in the *Kids Learn!* activity books.

Week 7: Will It or Won't It?
 Directions: Use the probability scale to answer the questions.
 impossible — unlikely — likely — certain

1. What does a probability scale show?

2. Place the letter of each of the following events on the probability scale above.

- Ⓐ You will be 10 on your next birthday.
- Ⓑ You will be a mother when you grow up.
- Ⓒ One member of your class will be a professional athlete.
- Ⓓ Your teacher will run the Boston Marathon.
- Ⓔ One day you will sing on Broadway.
- Ⓕ You can say the alphabet forwards.
- Ⓖ You can say the alphabet backwards.
- Ⓗ You will see a zebra on the playground at lunchtime.

Week 8: Reading Bar Graphs
 Dimitri sorted a bag of candy he got from a piñata at his friend's birthday party. He made the following bar graph to show the results.

Type of Candy	Frequency

Directions: Complete the table and answer the questions.

- How many ? _____
- How many ? _____
- How many more than ? _____
- Which type of candy occurred least? _____
- How many and are there altogether? _____

Week 8: Cones and Cylinders
 Directions: Study the information. Then, find the volumes of the cones and cylinders. Round the answers to the nearest hundredths.

Cylinders
 $V = \pi r^2 h$

Cones
 $V = \frac{1}{3} \pi r^2 h$

1. Cone: radius 2 in., height 8 in. $V =$ _____

2. Cone: radius 1 ft., height 3 ft. $V =$ _____

3. Cylinder: radius 3 cm, height 16 cm. $V =$ _____

4. Cylinder: radius 8 in., height 18 in. $V =$ _____

Engaging Families

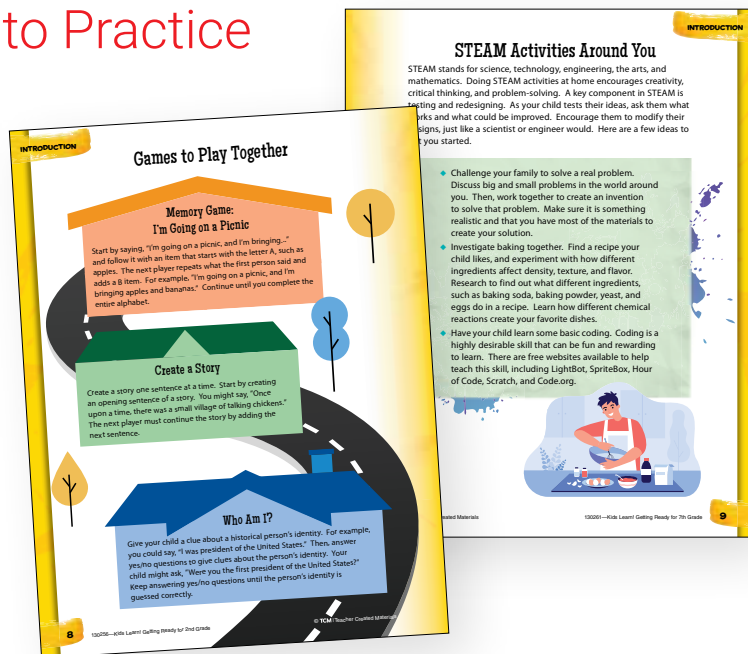
The single most accurate predictor of academic achievement is the extent to which families engage their child in learning at home and are involved in their child's education (National PTA 2000). In her book *Being Your Child's Most Important Teacher*, Rebecca Palacios notes that breaks from school "impact student learning and progress" and that over time, "these learning losses add up, and the academic achievement gap widens" (2022, 172). Palacios recommends that parents and caregivers read aloud daily to their child, talk with their child daily about their experiences, find activities in the community to experience with their child, and allow for age-appropriate technology use to build and maintain learning (2022).

Encouraging family and caregiver involvement with student learning has several key benefits. While the connection to academics may be clear, there are social and behavioral benefits as well. Perhaps not surprisingly, according to a study conducted by Nermeen E. El Nokali, Heather J. Bachman, and Elizabeth Votruba-Drzal at the University of Pittsburgh, increases in parents' involvement were accompanied by increases in children's social skills and declines in problem behaviors (2010). In recent years, research has emerged highlighting the need for, and value of, supporting students' social and emotional well-being. Educators recognize that "school engagement and academic achievement are impacted by students' social-emotional skills" (Tijms, Stoop, and Polleck 2018, 540).



Research to Practice

Kids Learn! engages families in their child's summer learning by offering ideas for activities to do as a family to build healthy habits and skills in reading, writing, and mathematics. The introduction also provides suggestions for games to play together, books to read together, a family science experiment, support in developing social and emotional well-being, and safety tips for technology use.



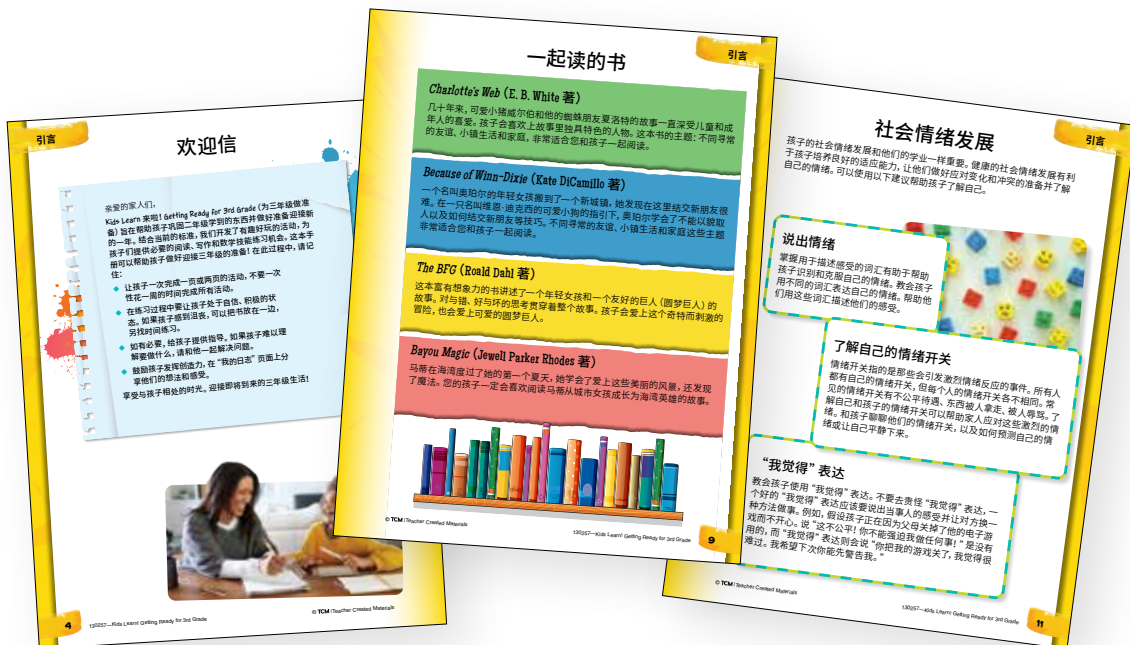
Supporting Multilingual Students and Families

When the home language is not English, families can face additional challenges in supporting their students. A 2018 study by Stephanie Lechuga-Peña and Daniel Brisson reported challenges parents faced in helping their children with schoolwork in English and the resulting helplessness they felt. Parents want to help their children, but without the proper resources, they feel frustrated. These feelings are exacerbated in low-income families. The same study revealed that “low-income mothers want to be involved with their children’s education . . . [but that] their socioeconomic status presents unique barriers” (Lechuga-Peña and Brisson 2018). Schools that respond to families in a more culturally and linguistically responsive way provide much more robust support. Findings from a study conducted by Jill S. Goldsmith and Sharon E. Robinson Kurpius (2018), suggest that “a parent’s effort to help his or her children succeed is not dependent on high levels of parent education or income.” The practice of providing monolingual communication further serves to exclude many families, including immigrant parents (Gonzalez, Villalba, and Borders 2015).



Research to Practice

The family resources provided in the *Kids Learn!* introduction are offered in five languages: English, Spanish, Arabic, Haitian Creole, and Mandarin. These resources are easily accessible via a QR code or web link.



Conclusion

Decades of research and studies have demonstrated the importance of engaging students' families in learning at home. This is especially crucial during away-from-school breaks, which many students experience for up to 10 weeks every summer. In analyzing 66 studies, reviews, and reports for their publication "A New Generation of Evidence: The Family Is Critical to Student Achievement," Anne Henderson and Nancy Berla conclude that when parents are involved in school, the success of all students—not just their own—increases (1994). They also found a correlation between the comprehensiveness of the partnership between school and home and student achievement (1994).

Ensuring that foundational skills are maintained and expanded in preparation for the next school year will help students avoid "summer slide" and immediately jump into learning when the school year begins. *Kids Learn!* extends the learning beyond the traditional school year, engaging students at home in research- and standards-based activities that practice basic skills as well as higher-level skills needed for success in school and beyond.



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