

Power Up! Apps for Kids with Special Needs and Learning Differences

A fresh look at learning

If your child has a special need or learning difference, you've come to the right place. Common Sense Media gets lots of requests for product recommendations from parents whose kids struggle with traditional learning. Some of their kids have a hard time with schoolwork; others have trouble staying on task or find it difficult to express their feelings.

Our hope for you and your kids

No matter which hurdles your kid faces, the apps and other media included in Power Up can give them an added boost. We don't expect an app to be a complete solution, of course. Working with kids who face challenges requires lots of time, attention, and patience on the part of a parent, teacher, or other adult caregiver. Our goal is to offer you a host of fun, well-designed apps that were recommended and tested by field experts. We hope they can become a part of your toolkit as you work with your child.

About the categories

Apps are arranged by challenge area and difficulty level. For each challenge area, we've included an informational overview with a list of typical challenges that kids face, help for choosing apps that match kids' needs, and further resources. You'll also find Power Tips with ideas for other activities you can do.

We've done our homework

Lots of work went into creating this guide. Our team spent several months surveying research, conducting interviews, and field testing products with field leaders, experts, teachers, and parents. In addition, Gayl Bowser, an expert in the field of special needs and technology, helped select products and authored the guide.

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Communication – Challenges Overview



Speaking, listening, and communicating are essential for school and social life, but many kids struggle to master these skills. For kids with challenges like speech and language impairments, communication can be particularly difficult. Of the more than 6 million kids ages 3-21 with special needs in the U.S. public education system, over one-fifth received services for speech or language disorders (U.S. Department of Education, 2011). Here, we provide suggestions for identifying and addressing kids' challenges with communication. We also offer tips for finding effective apps and a list of related resources.

Common challenges

- Listening to and understanding what others say
- Using language to communicate and interact with others
- Speaking clearly enough to be understood

Common signs

- Have trouble pronouncing certain sounds and/or combining sounds to form words
- Appear defiant because they have trouble understanding what people ask them to do
- Get frustrated because they can't find words to share their needs and ideas

Ways to help

- Wait, watch, and listen; allow kids enough time to speak for themselves
- Use gestures or simple signs to help kids understand what you're saying
- Encourage kids to tell stories and share information with others
- Repeat what kids say to help ensure you understand and so they can hear the words again
- Talk about what you're doing while you're doing it when you play or work with kids

What to look for in an app

- Opportunities for kids to both listen to words and respond with speech
- Clear and descriptive audio instructions and positive language
- Directions that are clear and easy for kids to understand
- Options that let you change the rate of speech or the sound of a recorded voice
- Settings that let you change the level of language difficulty to match kids' abilities

Learn more

- Communication Matrix an easy-to-use initial assessment tool for people of all ages
- Communication Development in Children with Language Delays provides a range of tools, including a list of signs to help identify a language delay, as well as articles to help parents and teachers better understand kids' communication needs
- The ABCs of Child Development Developmental Milestones for Your Child's
 First Five Years a map to help you follow
 kids' developmental milestones from birth to age
 5. The section on Communication Skills provides
 helpful insight into language development for
 young kids

Our sources

- American Speech-Language-Hearing Association
- National Dissemination Center for Children with Disabilities
- National Institute on Deafness and Communication Disorders

Experts consulted

- Melinda Techler, speech language pathologist and reading specialist
- Ali Steers, speech and language pathologist, Chime Charter School

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When kids have communication challenges, apps and other media can give them a boost — helping them learn to speak, grasp new words, and understand what others are saying. With your help, these great learning products can help your kids develop early speaking and listening skills.



Baby Hear & Read Verbs

Kids can have fun and learn new words at the same time. They simply touch a photo to enlarge it, listen to a matching sound, and hear a word read aloud. Adjust settings based on kids' communication skills to select the number of choices, type of voice, and spelling options.



Proloquo2Go

Tapping "buttons" that represent words, kids can string together whole sentences. This is great for kids who have basic or severe speech challenges. Kids, parents, and teachers can also add their own photos and images to create icons, edit existing buttons, move them, or search by keyword.



Scene Speak

Kids create interactive stories and learn to understand spoken language. They can even create scenes using either in-app images or their own. Try combining scenes and images into books that speak the text, or change sound, voice, and playback speed options to match kids' learning needs.



SoundingBoard

For kids who have difficulty speaking, parents and teachers can create an unlimited number of custom picture card sets with image, text, and audio. Kids tap on the relevant card, and the app speaks for them.



Speech with Milo: Sequencing

Milo and his friend Melvin help kids learn basic sequencing and storytelling skills. Kids put sentences of a scrambled story in order and see the story animate when they answer correctly. Customize options for kids who need extra support by turning on hints and audio narration.



Kids with communication difficulties need opportunities to share their ideas and make meaningful choices. Encourage kids to point to pictures in *SoundingBoard*. As they connect images with audio, they build better understanding of the words.

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These digital picks help kids who have communication challenges learn to speak, grasp new words, and understand what others are saying. With your help, these great learning products can help kids share their words and ideas more clearly.



Articulation Station

Pronunciation, articulation, and understanding how letter sounds form words are important communication skills. In these exercises, games, and stories that focus on one letter sound at a time, kids can learn to identify their own speech goals. Parents and teachers can track kids' progress, too.



Fotobabble

It's fun for anyone to add speech to photos and email them to friends and relatives, but it's especially good for kids who have trouble speaking. Kids can take pictures, record audio descriptions, and share them with others. This is a great way for kids to share when communication is difficult.



LanguageBuilderDeluxe

Help kids improve the way they use language to express ideas, form sentences, and understand what they hear. Kids are challenged to create their own sentences from photo prompts and record audio clips of each sentence. Recording and playback encourage self-assessment.



Speech with Milo: Interactive Storybook

Speech with Milo is a delightful way to learn how to speak phrases and tell stories. Kids record their own stories and hear them played back. They can touch a character or object to see it move or make a sound as they interact with this upbeat story about helpfulness and friendship.



TapToTalk

Kids who aren't able to speak or who have limited speech can convey simple messages about what they want, how they're feeling, and more with this verbal-assist tool. Kids tap pictures, and the app speaks for them. This app is specifically designed for kids who have communication challenges.



Dinnertime, bedtime, trips in the car, and walks in the park all provide opportunities to practice communicating. During daily routines and activities, describe what you're doing, describe what kids are doing, and talk about what you do together. Use apps like *Fotobabble* and *Speech with Milo* to reinforce language and communication skills while having fun at the same time.



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With kids who have communication challenges, apps and other media can help them learn new words and understand what others are saying to them. With your help, these great learning products can help kids overcome barriers to communication in real-world situations.



GCFLearnFree.org

Kids can learn about the essentials of email, Twitter, and other online communication tools with these simple and engaging tutorials. Have them check out Email Basics and Twitter101 to learn about online communication.



Kidzworld

This online social network for tweens and teens is a great way for kids to make friends and practice communication skills in a safe environment. Parents are notified when kids join; staff moderators approve the photos, videos, and articles that kids post.



QuickVoice Recorder

Kids can send emails using only their voice and a few simple taps — they don't have to type a word. Kids speak their messages, and their words are turned into text. This could be great tool for kids who have difficulty with typing or writing.



Toontastic

Storytelling comes to life as kids create their own cartoon puppet shows. Kids choose the setting and characters and record their own dialogue to make the stories more personal. This fantastic creative outlet lets kids express themselves and share video creations online.



Words, body language, sounds, gestures, and pointing to pictures are all ways that kids communicate. There's no *best* way to share thoughts and ideas. Accept any way that kids communicate, and focus on what they have to say. Encourage older kids and teens to use tools like email, Twitter, and Kidzworld to help them reach out to others.

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Social Interaction – Challenges Overview



Social and emotional skills are essential for school and social life, but many kids struggle to master them. For kids who have a special need — such as a developmental delay or autism — social situations and handling emotions can be a challenge. We know that about 15% of parents with kids ages 4-17 talk to healthcare providers or school personnel about their child's emotional or behavioral difficulties (National Center for Health Statistics, 2006). Here, we offer ways of identifying and addressing kids' social and emotional challenges. We also offer tips for finding effective apps and a list of related resources.

Common challenges

- Recognizing or managing their own emotions or seeing others show emotion
- Showing in traditional ways that they care about others. For example, some kids who are excited may squeal, jump, or flap their hands instead of saying how happy they are. And some kids who are really sad may look angry or strike out instead of crying or being quiet.
- Making or keeping friends and working with peers

Common signs

- Avoid eye contact and/or become nervous in unfamiliar social situations
- Misread social cues (particularly if they're not obvious) or fail to consider the social context
- Show lots of fear, distrust, or uncontained emotion, from social unease to severe upset
- Share information about their own interests without finding out whether others are interested
- Talk about only a few topics that they're very interested in
- Have difficulty grasping abstract ideas

Ways to help

- Expand kids' vocabulary of feeling words
- Encourage kids to use coping strategies such as self-calming, scripted routines for approaching people and identifying situations that make them uncomfortable
- Help kids practice typical social interactions, and avoid overly formal language or unnatural eye contact by role-playing social situations in advance
- Give kids opportunities for supported, face-to-face peer interaction
- Give kids opportunities to use protected digital social media tools to make friends in a stress-free environment

What to look for in an app

- Tools that have characters or people, as opposed to only objects or concepts
- Ample response time, with opportunities to try again and positive feedback
- Practice identifying facial expressions and social cues
- Chances to interact safely with kids in other locations (virtual pen pals, pre-scripted chat)
- Adjustable levels of reinforcement and activity so that tools can be set to avoid fear, confusion, and too much stimulation

Learn more

- National Center for Learning Disabilities many articles about social and emotional skills, with links to other informative sites
- AbilityPath.org online hub and community for parents of children with special needs, with helpful tools and resources
- Social Thinking a treatment framework and curriculum developed to improve individual social-thinking abilities

Our sources

- Collaborative for Academic, Social, and Emotional Learning
- National Center for Learning Disabilities, Elias, M. J. (2004). "The connection between social-emotional learning and learning disabilities: Implications for intervention".
 Learning Disability Quarterly 27 (1): 53–63.

Experts consulted

- Barbara K. Polland, PhD, MFT, professor emeritus, CSUN
- Kelly Priest, MS, partner at Social Foundations LLC
- · Joy Zabala, AIM center director, CAST

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Tuning in to their emotions is crucial for kids' success with family members, friends, classmates, and in everyday interactions. These great tools can help kids learn to express their emotions and understand what others are feeling.



ABA Flash Cards & Games – Emotions

Identifying and understanding emotions are crucial life skills. This collection includes 50 concrete, colorful images of the 10 most basic emotions. Five examples of each feeling help teach basic emotions in a consistent way with repetitive practice.



Go Go Games

Kids learn to notice differences and to focus on details. Three different games show a set of objects and ask kids to match two that look the same — an essential skill for kids with autism. Kids practice noticing colors, patterns, and sizes of objects to make a match.



Look In My Eyes 1 Restaurant

Making good eye contact is essential for developing friendships and other social skills. Kids can practice as faces with different expressions flash on the screen. The trick is for kids to hold eye contact long enough to see a flashing number appear. Shy kids in particular can benefit.



Model Me Going Places 2

Kids who have emotional challenges often need help predicting what will happen in new or unfamiliar places. Here, they watch a photo slide show of other kids in places like the grocery store, school, and the dentist's office. Kids can review expected behavior and feel more at ease in new places.



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Peek-a-Zoo by Duck Duck Moose

Kids with social and emotional challenges need ways to learn about what others are feeling. By studying the facial expressions of cartoon animal characters, kids can learn to identify emotions and social cues. It's simple to use and a fun way to learn early social skills.



That's How I Feel

Simple but powerful, this app helps kids express their feelings. Kids match their feelings to the pictures that are shown and tap images to hear statements of emotion. Kids can grow more self-aware and learn that there's a wide range of emotions.



Touch and Learn — Emotions

Reading body language and facial expressions is an important part of early social learning. By looking at photos and figuring out which person is expressing an emotion, kids get a chance to practice in a safe way. And it's easy to adjust settings for each kid's needs.



Use apps like *Peek-a-Zoo*, *That's How I Feel*, and *Touch and Learn* — *Emotions* with your kid. Practice making faces that show emotions together, and take pictures for your own version of showing how you feel.

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Plenty of apps and other media offer kids with social and emotional challenges a chance to improve. They can learn to put themselves in other people's shoes and interact appropriately with both kids their own age and adults. These great tools give kids amazing opportunities to practice skills they'll use at home, at school, and in their community.



Calm Counter - Social Story and Anger Management Tool

Having strategies for handling anxiety and anger in positive ways is essential for independence. *Calm Counter* helps kids with anxiety or anger issues learn self-awareness as they begin to identify when they need a break and practice calming down.



Doodle Buddy for iPad – Paint, Draw, Scribble, Sketch – It's Addictive!

Choose a color and a brush, and start doodling. Options to send doodles by email or play them live on the Internet make this a great social learning tool. Kids can draw with a friend or family member in the same city or on the other side of the country.



Feel Electric!

These videos, photos, games, and emotions-related vocabulary-building activities star the cast of the PBS show *The Electric Company*. Kids can learn emotional awareness, expression, and language skills. *Feel Electric!* is full of activities that are instructive and entertaining.



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Hidden Curriculum for Kids

This real-life-based app spurs conversations about the countless "unwritten social rules" we encounter every day that can cause confusion and anxiety. Some kids can learn the hidden curriculum almost automatically. But for kids who need more direct instruction and practice, this app can help.



Social Adventures

Some kids need direct instruction on social skills like initiating play, respecting other kids' personal space, and interpreting humor. Each activity here helps kids gain confidence and success in navigating these types of social situations.



Time Timer

Time Timer displays a red disk that quietly gets smaller as time passes. Kids learn that when the red is gone, time is up! This app is perfect for any kid who wants to know "How long?" but has trouble understanding a spoken answer.



Once kids learn new social skills with apps and games like *Feel Electric!* and *Social Adventures*, encourage them to use apps like *DoodleBuddy* to practice those skills with friends and family members.



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When kids use these great apps, games, and websites, they can practice and improve what they understand about social settings and skills. Help them become more independent in social situations as they work and interact with others.



BeSeen

For teens who have difficulty relating to others, it can be especially challenging to navigate high school. *BeSeen* is an innovative simulation of a high school's social network that teaches tweens and teens about being safe and responsible online.



Kidzworld

This online social network for tweens and teens is a great way for kids to make friends and practice everyday interactions in a safe environment. Parents are notified when kids join; staff moderators approve the photos, videos, and articles that kids post.



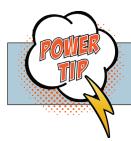
The Sims Social

SIMS can help teens practice social skills as they make sure that their SIMS' needs — like hygiene, hunger, and fun — are met. SIMS follow social behaviors such as visiting the houses of other SIMS. Teens can invite Facebook friends to become neighbors.



Wonderful Days – Diary with Style

Wonderful Days – Diary with Style is an excellent app for making multimedia diary entries. Kids can create notes associated with different days and add photos, sound recordings, and their location (enabling location services is optional). It's a wonderful option for self-expression.



Once kids learn a new skill, invite friends, brothers, sisters, or other family members to play with them using the same app, website, or game. Play and practice together to reinforce social learning.

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Organization - Challenges Overview



Staying organized and building routines — sometimes referred to as executive functioning skills — are essential for school, work, and social life, but many kids struggle to master them. For kids who have a special need such as ADHD (Attention Deficit Hyperactivity Disorder) or autism, academic and extracurricular situations can be difficult. One in 88 children in the United States has been identified as having autism (Centers for Disease Control and Prevention, 2012), and even more have ADHD or a learning difference. Here, we provide suggestions for identifying and addressing kids' challenges with organization. We also offer tips for finding effective apps and a list of related resources.

Common challenges

- Developing new routines or making changes to old ones
- Transitioning from one activity to the next
- Managing space, time, and materials

Common signs

- Have difficulty planning and understanding how long a project will take to complete
- Struggle to communicate details in an organized, sequential manner
- Have trouble following directions, particularly when they're only given orally
- Start many activities at the same time without finishing any of them

Ways to help

- Prepare schedules that show pictures of what will happen, and review them often
- Plan and structure routines at home and school, and stick to them as much as possible
- Give kids warning before changing from one activity to the next

What to look for in an app

- Use of visual organizational aides like pictures, alarms, and/or reminders
- Visual ways to show time passing and what will happen next
- Videos of kids doing tasks and completing everyday routines
- Options to break big tasks into smaller, more understandable steps

Learn more

- Late, Lost, and Unprepared: A Parents'
 Guide to Helping Children with Executive
 Functioning by Joyce Cooper-Kahn Ph.D. and
 Laurie Dietzel Ph.D. a parents' guide to help
 kids who struggle with executive functioning
- Executive Function in Education: From Theory to Practice, edited by Dr. Lynn Meltzer (2007, Guilford Press) chapter five summarizes the relationship between executive functioning difficulties and learning disabilities

Our sources

- · LD OnLine
- National Center for Learning Disabilities

Experts consulted

- Leigh Burley Fong, OTR/L, co-founder, Ready Set GO Therapy, Inc.
- Kelly Priest, M.S., partner at Social Foundations LLC

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Apps and other media can help kids who are challenged by organization and routines learn to understand and predict what will happen next, get ready for it, and remember the steps. These picks can help kids understand more about their environment and rehearse routines in safe, simulated ways before they try them in real-life activities.



iDress for Weather

Looking up the weather and dressing accordingly can help kids build independence in everyday routines. This terrific tool uses the Internet to search for local weather conditions and suggests what kids should wear. Kids can even upload photos of their own clothes.



iTouchiLearn Life Skills: Morning Routines for Preschool Kids

Kids can learn to think about routines and get ready for school more independently. Seven animated scenes walk kids through various tasks, from waking up to packing a school bag. They can review each routine and follow along. Now you have a way to motivate reluctant kids to get going in the morning!



LeapFrog Explorer Learning Game: Pet Pals 2: Best of Friends!

Kids explore, play math games, and learn routines to take care of a virtual puppy. They learn about basic pet-care routines, including how to address a pet's physical and emotional needs. They even get a chance to learn about empathy by helping other friends' pets in the game.



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Model Me Going Places 2

This is great for any kid who needs some help predicting what will happen in a new place. Kids are introduced to six sets of narrated photos that show what typically happens and what behaviors are expected when going to the doctor, playground, store, and more.



MyPlay Chef Lite

Kids who love to cook can learn how to make pancakes, cupcakes, sandwiches, and pasta. This fun app lets them pick the ingredients and make no-mess recipes. Kids learn about cooking routines and get step-by-step directions as they play.



ZisBoomBah

Creating healthy, balanced eating habits can be hard for kids who have trouble with change. Now they can get feedback on eating the right mix of foods to make balanced meals. And when they create new meals, they can send shopping lists, recipes, and coupons to help their parents.



Ask kids who like *LeapFrog Explorer Learning Game: Pet Pals 2: Best of Friends!* to help care for family pets. Emphasize that family pet care is a team effort, and give kids age-appropriate tasks. Even early learners can fill food bowls or brush furry pets.



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These digital picks can help kids who have difficulty getting organized and creating routines learn to understand and predict what will happen next, get ready for it, and remember the steps. Use these products to practice new routines and learn about schedules and time management.



Airport Mania: First Flight

Kids hone their time-management skills as they take on the role of air traffic controller. They choose the runways where planes land and the terminals they pull into. *Airport Mania* teaches time-management ideas in a unique game format.



Chore Pad

Seeing their schedule laid out in advance can help kids who have trouble thinking ahead. Use this helpful app, which can also provide pictures to reinforce organization, as an electronic weekly scheduler. Kids can see the entire day or part of the day and check off tasks as they're done.



Cooking Mama 3: Chop & Shop

This collection of cooking-themed mini-games includes tons of recipes that help kids learn organization for cooking. There's plenty to do and a lot of extra material to unlock. Introduce kids to cooking routines with clever, surprisingly detailed cooking challenges.



Time Timer

How much longer? This is the classic cry of kids — in cars, waiting for appointments, and elsewhere. This timer features red disks that get smaller as time ticks down — a great visual aid for kids who get impatient. Knowing how long things take can help kids exercise self-control.



Estimating time can be difficult for kids who are challenged by organizational tasks. After using *Time Timer* for a while with your kids, challenge them to estimate different amounts of time without using the app. Have them guess when 30 seconds, then one minute, then 10 minutes have gone by. Show them activities that take approximately that amount of time to help give them a reference point.

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Apps, games, and websites for learning can help kids who are challenged by organization and routines learn to think ahead and prepare themselves for whatever's next. Use these products to complete activities like following schedules and remembering the steps of everyday routines and activities.



DLTK's Crafts for Kids

Completing projects like these fun activities and crafts is a step toward developing sound routines and organizational skills. Kids can also learn how to write checks and balance a checkbook — a great help for older kids who want to develop real-life skills.



GCFLearnFree.org

Give kids the opportunity to experience daily living challenges without real-world consequences. Watch animated lessons about how to count pills, bake a cake, or take money out of an ATM. This website covers a wide range of activities to help kids learn routines and life skills.



My Video Schedule

Video modeling can help kids who have challenges getting organized and creating routines learn to follow a schedule. Here you'll find a full library of photos and pre-made videos for learning. If you don't see the topic that kids need, you can add a photo or video of your own!



TextMinder SMS text reminders

Adults and kids can create one-time or recurring text messages. Set the date and time so texts arrive exactly when needed. Setting up a repeating text message for taking medication, catching the school bus, or bedtime can help kids follow routines independently.



Wonderful Days – Diary with Style

Self-reflection and expressing your thoughts are good skills to practice daily. Kids can use text, images, and sound in their daily diary entries as they use this great multimedia creation app to form a writing routine.



Add some purely silly or fun videos to *My Video Schedule* to liven up kids' day. Kids are used to schedules packed with appointments, routines, and chores. Sprinkling in more leisure activities like dancing, drawing, or baking a cake can give them something to look forward to.

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Reading - Challenges Overview



Reading and writing skills are necessary for school, work, and life, but many kids struggle to master them. For kids with a learning difference or poor coordination in their hands, learning to read and write can be particularly difficult. Some kids also have mild vision problems that affect how their eyes move across a page or how well they can see small print. Nearly 62 million (or 1 in 5) Americans are dyslexic (The Big Picture: Rethinking Dyslexia, 2012). Here, we provide a list of common signs of reading and writing challenges and offer tips on how to help kids with those challenges. We also have tips for choosing apps to improve reading and writing skills and a list of related resources.

Common challenges

- Reading or spelling words that other kids their age can recognize and spell
- Learning numbers, the alphabet, days of the week, colors, and shapes
- Making their eyes follow the line of words on a page
- Remembering what they just read

Common signs

- Are reluctant to read and write, and read slowly and with much effort
- Confuse letter names and sounds
- Have messy, unreadable, or very large handwriting
- Write letters backwards or upside down when they're in third or fourth grade
- Confuse basic words like was and want or left and felt

Ways to help

- Give directions verbally as well as in writing
- Break down directions into small steps; give only one or two instructions at a time
- Encourage kids to spell by speaking each sound aloud
- Focus on the child's strengths, not weaknesses
- Try not to expect reading or writing beyond kids' abilities

What to look for in an app

- Opportunities to practice letter or word recognition and expand vocabulary
- Tools that read words aloud and highlight words as they're read
- Settings that allow for gradual increase in length or complexity of words/passages
- Keyboards that read each letter, word, or sentence aloud as a child types
- Automatic spell checking that tells kids when they misspell a word
- Predictive text, which gives kids options to select from a few word choices

Learn more

- LD Online parents and teachers can find authoritative guidance on ADD/ADHD, dyslexia, dysgraphia, and other reading and writing challenges
- Yale Center for Dyslexia and Creativity current research, advocacy, and information about dyslexia
- National Dissemination Center for Children with Disabilities — article "Should I Be Concerned About Reading Difficulties?" provides a guide to identifying common signs of dyslexia at different ages
- The Big Picture: Rethinking Dyslexia —
 documentary that explores the hidden gifts of
 dyslexics; official selection award at many film
 festivals, including Sundance

Our sources

- Yale Center for Dyslexia and Creativity
- National Dissemination Center for Children with Disabilities
- University of Michigan Health System

Experts consulted

- Melinda Techler, speech language pathologist and reading specialist
- Amy Martini, reading recovery teacher, Ravenswood City School District
- Gayl Bowser, independent assistive technology consultant

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A host of imaginative apps and other media can help kids learn to read and write. Kids can learn early skills like tracing letters and sounding out words or make up cartoon stories about their own lives and interests. Touch-sensitive screens and audio feedback give kids an extra boost as they start to develop reading and writing skills.



Bob Books #1 - Reading Magic

This great interactive book has kids drag letters to the right place below a picture as the letters and words are sounded out. Kids will delight as the black-and-white screen changes to color and drawings animate. Adults can customize settings to suit kids' phonics knowledge and reading level.



FirstWords: Deluxe

Each screen gives kids an object and a word to spell. They have to drag and drop letters into the right slots. When the word is complete, a voice spells and says the word, and the next word appears. Lots of options let adults tailor the experience to match kids' skills and preferences.



Go Go Games

Kids learn to notice differences and to focus on details. Three different games show a set of objects and ask kids to match two that look the same — an essential skill for kids with reading challenges. Kids practice noticing colors, patterns, and sizes of objects to make a match.



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A host of imaginative apps and other media can help kids learn to read and write. Kids can learn early skills like tracing letters and sounding out words or make up cartoon stories about their own lives and interests. Touch-sensitive screens and audio feedback give kids an extra boost as they start to develop reading and writing skills.



iWriteWords

Kids practice writing letters, numbers up to 20, and simple words. By following Mr. Crab with a finger, kids write each letter and number. What's more, adults can adjust the difficulty level and features for individual kids with writing challenges.



Licking Letters

Words flash, and then kids tap the screen when any letters in the word float by. Tapping makes the frog shoot out its tongue and "lick" the letter. You'll find that the game slowly increases in difficulty depending on how kids do, though you can also adjust settings to keep kids engaged.



Starfall

This free learn-to-read method is based on many studies and educational research. With the site's online books, songs, rhymes, and other games, kids progress from being reading ready to independent readers. It also includes many valuable resources for parents and teachers.



Once kids learn new skills with tools like *FirstWords: Deluxe*, extend learning into home or school. Find the same words in the home or classroom, and match the letters.



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These digital picks can help kids learn to read and write. Kids can find a challenge in reading-comprehension questions or build vocabulary through fun web and mobile activities.



Bob Books #2 - Reading Magic

This interactive reading and spelling app presents a 12-page book, which can be played on four different levels. On each page, kids spell most of the words in each sentence, one at a time. The four difficulty levels make this a customizable tool for kids with reading challenges.



Funology

Kids can explore lots of engaging activities from the site's menu of crafts, recipes, science experiments, and more. They can learn to follow directions with the step-by-step instructions and improve comprehension skills by reading fun facts, learning new jokes, and playing word games.



iA Writer

This simple word-processing app keeps kids focused on writing without distracting or confusing formatting options or graphics. Kids can sync text written in iA Writer with other devices for later revision, editing, and printing.



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Phonics Genius

This flashcard-style app helps kids learn words by letter sounds. Kids learn how to listen and look for letter sounds and piece them together to form words. For a more personalized learning experience, kids can record their own voice.



Smiley Sight Words

Some words can't be illustrated with pictures or sounded out according to phonics rules, so kids need to learn them by sight. This app includes about 85% of these essential words used in early reading materials. Adults can check progress reports after each session.



Word Wizard - Talking Movable Alphabet with Spell Check and Fun Spelling Tests

For kids who are just learning to spell and work with letters, try this fun speaking, spelling, sentence practice, and phonics tool. Key features include spelling word lists and the option to create custom study lists. It's a great way for kids with reading challenges to create their own lists.



As you read books with kids, help them keep track of any new or unfamiliar words they encounter. Encourage them to practice writing the words using *iA Writer* or create custom spelling lists with *Word Wizard*.



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Apps, games, and websites for learning can help kids who are challenged by organization and routines learn to think ahead and prepare themselves for whatever's next. Use these products to complete activities like following schedules and remembering the steps of everyday routines and activities.



CAST UDL Book Builder

Use this site to create, share, publish, and read electronic books that engage kids and support learners according to their individual needs, interests, and skills. Kids can log in to write their own books and share them with friends.



ClaroSpeak US

This helpful app can read most documents out loud. Students with reading challenges can get information from the text and learn new words while they see and listen to each word in the document. It can also be a great tool to help kids proofread a text by hearing their writing read aloud.



Comic Life

Kids can practice basic storytelling skills, such as plot development, and learn how to establish characters, set the scene, and write dialogue. This is a fun way for kids to become amateur cartoonists, share their stories, and improve their writing.



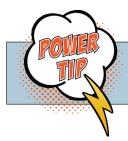
Dragon Dictation

Kids tap "Record" and start talking. When finished, they press "Stop," and the dictated words appear on the screen almost like magic! Kids who struggle with reading or writing can benefit from using *Dragon Dictation* to help with tasks they find difficult.



Speak it! Text to Speech

Listening to text helps kids who struggle with reading get information from printed materials. Kids can copy text from emails, documents, web pages, and PDF files and paste it into *Speak It!* One particularly nice feature is that the text is spoken in a high quality voice.



Use fun websites like Comic Life to help motivate kids to create stories. Then use a different writing tool — like *ClaroSpeak* or *Dragon Dictation* — to help them record their words and ideas in print.

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Math - Challenges Overview



Kids need math skills to succeed in school, manage money as they get older, and one day get jobs. But for many kids, math doesn't come easy and feels scary. For those who have a learning difference such as dyscalculia or a developmental delay, understanding numbers, equations, and other math concepts can be very tough. We know that anywhere from 6 to 14 percent of kids through age 19 have some type of learning difference in math. (Mayo Clinic, 2005). Here, you'll find an overview of math challenges, along with suggestions for identifying and addressing kids' math-specific learning needs. We also provide tips for finding effective apps and a list of related resources.

Common challenges

- Understanding what numbers mean and how math symbols relate to quantities/actions
- Memorizing basic number facts in addition, subtraction, multiplication, and division
- Developing memory strategies they can use on their own
- Understanding words and language that describe math ideas
- Remembering the steps of complex calculations
- Handwriting and arranging numbers and math signs on the page

Common signs

- Try to complete complicated math problems by counting fingers, pencil marks, or small blocks or objects
- Can use number ideas at home but have trouble with formal school math
- Count the same items or pictures differently when they try several times
- Are unusually messy or disorganized with papers, books, and other things
- Get different answers every time they complete the same calculation

Ways to help

- Help kids show and explain what a problem means by using objects, pencil marks, etc.
- Read problems to kids or help kids say problems out loud before and after
- Ask kids to talk about how they are doing math work
- Give kids a pocket-size facts chart so they can learn to do more difficult operations while learning basic math facts
- Use physical materials to help kids make concrete connections to concepts like place value, fractions, decimals, measurement, money, percentage, and even algebra

What to look for in an app

- Multiple ways to practice the same skills in different ways
- Chances for kids to problem solve rather than demonstrate math ideas
- Options for adjusting levels of reinforcement and stimulation to meet kids' individual needs
- Plenty of response time with chances to try again
- Immediate feedback when kids are successful
- Immediate and informative help to show what went wrong when kids make mistakes

Learn more

- National Center for Learning Disabilities helpful site that offers many articles about social and emotional skills, with links to equally informative sites
- AbilityPath.org online hub and community for parents of children with special needs
- **LDOnline** working with your child's teacher to identify and address math disabilities
- Social Thinking a treatment framework and curriculum developed to improve individual social thinking abilities

Our sources

- iPhone, iPad, and iPod Touch Apps for (Special) Education by Samuel Sennott, Eric Sallers, and David Niemeijer
- · LD Online
- National Council of Teachers of Mathematics

Experts consulted

- Barbara K. Polland, PhD, MFT, professor emeritus, CSUN
- Kelly Priest, MS, partner at Social Foundations LLC
- Joy Zabala, AIM Center director, CAST

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Countless apps and other media are available to help kids develop essential math skills. With these learning products, positive feedback and encouraging characters can help kids build confidence and excitement about numbers and shapes and learn basic operations like addition and subtraction.



Jake's Never Land Pirate School

Early learners practice tracing shapes, counting, and following directions. Kids can tap out pirate drumbeats or use a spyglass to discover treasure as they learn basic math skills. Fit kids' photos onto a cartoon pirate body to personalize the game.



Mermaid Waters: Preschool Math Game, Adventure & Story

Kids help Hana and Cory rescue sea creatures as they tackle math problems. With each rescue, kids earn a sticker to play with in the "stickery." Progress reports include data on the skills that kids have learned. Kids will enjoy this fun way to learn early math skills.



Montessori Numbers - Math Activities for Kids

The Montessori method encourages kids to play with objects to build an understanding of math concepts. *Montessori Numbers* translates this method to the digital world, using blocks and number rods to help kids learn counting and quantity. It exposes kids to math in a meaningful way.



Shapes & Puzzles by Pirate Trio

Block-style puzzles help kids learn to identify shapes and make relevant connections between shapes and objects in the world. Kids choose images and match shapes to fill them in. A more basic game for early learners shows only shapes and gives voice direction to help kids match them.



Team Umizoomi Math: Zoom into Numbers HD

Five mini-games earn kids trophies and unlock the Key to the City. The city has objects to interact with and great features like profiles for up to four kids and feedback that can be adjusted to meet the needs of kids who have math challenges.



The new skills that kids learn with tools like *Montessori Numbers* or *Jake's Never Land Pirate School* can transfer to everyday activities in the home, classroom, and community. Help kids make these connections by creating opportunities to practice in the real world. Have kids count objects, or challenge them to look for shapes or quantities in a game of *I Spy*.

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These digital picks help kids develop essential math skills like ordering, grouping, and basic money management. With these learning tools, kids build foundational concepts and see how math can be applied to everyday situations.



Carmen Sandiego Adventures in Math: The Great Gateway Grab

One of Carmen Sandiego's henchmen has masterminded the theft of the Gateway of India, and it's up to the kids to find out who did it. They must solve 10 practical math problems to uncover the mystery. This fun educational game will help kids practice math skills without struggles or frustration.



Freefall Money

This is a fun way for kids to practice counting money with coins. Kids choose from three straightforward modes of play: fill the piggy bank with the requested amount, enter the amount of money available, and add up a group of coins. Practice in counting, adding, and estimating money will pay off.



Marble Math Junior

Learn addition, subtraction, multiplication, division, fractions, and more with this highly customizable math app. Kids use critical thinking skills and can hear problems read aloud to overcome obstacles to math learning. They'll find fun and fantastically varied math practice.



Numbers League

To capture the villains, kids add, subtract, or multiply — sometimes all within the same problem — to get a target total. This clever game lets kids practice math skills in a fun environment. Kids can choose from five different levels, from basic arithmetic to negative numbers and multiplication.



Playful Minds: Math (5-8 years old)

Make learning math engaging and fun with these great mini-games. Kids practice math skills and compete against others in multiplayer mode. They start by creating an avatar that moves from game to game and then earn trophies, certificates, and accessories as they complete exercises.



Turn apps like *Marble Math Junior* into a physical game. Create a maze out of paper or cardboard. Set up numbers written on Post-Its, coins, or other objects of different quantities around the maze. Have kids roll balls or marbles through the maze, hitting the objects in order — from smallest to largest, or vice versa. Try different variations so they can learn different math skills.

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For kids who have math challenges, apps and other media can help them develop essential skills. With these learning products, they'll see how math can be applied to everyday situations and will learn important foundational concepts.



A Maths Dictionary For Kids

If kids don't understand the language of numeracy, they literally can't do the math. This animated, interactive online math dictionary explains more than 600 common mathematical terms and math words in simple language. This is a great resource for kids with math challenges.



DragonBox+

Kids with no prior knowledge of algebra or arithmetic can learn to solve simple algebraic equations. This inventive game helps kids learn algebra through gameplay and without the use of intimidating math language. It's simple enough for beginners but deep enough for more advanced kids and teens.



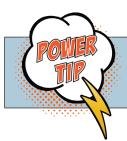
Figure This!

Kids learn math through everyday examples, from judging how far you can drive on a tank of gas (using mileage-per-gallon estimates) to how distance and angles affect mirror reflections. Fun problems teach kids a variety of math principles, and resources for parents and teachers extend the learning.



Gazillionaire!

This outer space-themed sim teaches economics in a fun way. Up to six real players can learn together about the economy and money management concepts like loans and interest, wages, and profit. *Gazillionaire!* is an in-depth economics sim disguised as wacky, space-themed fun.



Encourage kids or teens to play *Gazillionaire!* with their friends. They can even include you in the mix. Learning about money management in a fun setting with friends can help them overcome a fear of math and money.

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Motor Skills - Challenges Overview



Motor skills are essential in order to walk, run, or even grip a pencil to write, but many kids struggle to master them. For kids with physical developmental delays or developmental coordination disorders, controlled movements can be a real challenge. Kids start developing the two types of motor skills — gross and fine — very early in life. Gross motor skills involve kids' larger, stronger muscles, which they use to sit, crawl, walk, run, and jump. As their bodies gain mobility and stability, kids develop fine motor skills, which require small muscle movements of the hands to do things like tie their shoes or cut paper with scissors. Read on to learn about ways to identify motor challenges and help kids improve both gross and fine motor skills. We also have tips for effective apps and a list of related resources.

Common challenges

- Small muscle (fine motor) movements like picking up small objects, drawing, writing, and fastening buttons and zippers
- Large muscle (gross motor) movements like walking, running, and playing sports
- Simple movements such as waving goodbye or more complex movement patterns such as dressing or grooming

Common signs

- Weak or "floppy" muscles or very stiff and inflexible muscles
- Unusual or underdeveloped movement
- Learning to sit up, crawl, or walk much later than other kids the same age
- Problems with fine motor tasks such as pointing, picking things up, drawing, and writing
- Difficulty playing movement games like soccer and tag with other kids the same age

Ways to help

- Work with kids to practice the specific movements that challenge them
- Encourage kids to try increasingly difficult new movements
- Divide difficult motor skills into smaller steps that are easier to learn

What to look for in an app

- Opportunities for kids to practice hand-eye coordination
- Chances to practice balance and gross motor activities via games with movement sensors
- Options to adapt movement activities to make them more or less difficult
- Speech commands for kids who struggle with typing

Learn more

- National Dissemination Center for Children with Disabilities — a great resource with detailed information about specific learning differences
- University of Michigan Health System facts and resources about developmental delays
- Developmental Coordination Disorder: Hints and Tips for the Activities of Daily Living by Morven Ball — a helpful booklet that explains Developmental Coordination Disorder and offers practical tips to help kids with this condition
- Therapy Street for Kids lots of ideas, activities, and games to help with motor and sensory challenges
- Early Intervention Support.com sections on gross and fine motor skills provide essential information for teachers and parents of kids with developmental delays

Our sources

- National Center for Learning Disabilities
- Medscape
- CanChild

Experts consulted

- Leigh Burley Fong, OTR/L, co-founder, Ready Set GO Therapy, Inc.
- Lani Hessen, OTR/L, pediatric occupational therapist, clinic director, Kidspace

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For kids with motor challenges, apps and other media offer fun, creative ways to move their bodies and use their digits. Products like these can give them practice with fine motor skills (like writing) and let them be active participants in games like bowling and basketball.



Active Life: Magical Carnival

You'll tame lions and walk tightropes under a circus big top; you'll ride broomsticks and chase ghosts in a wizard's castle. Games are played with the Wii remote and the Active Life floor pad. Move and exercise while keeping your mind sharp with thinking games.



Awesome Xylophone

Tap out tunes like "Happy Birthday," or make up a new song. Playing on this xylophone is a great way for kids with motor challenges to learn fine motor skills like tapping a target and using their non-dominant hand. They can also develop writing skills by practicing hand and finger movements.



iWriteWords

Learning to write numbers, letters, and basic words with technology can help kids who struggle with penmanship. By following Mr. Crab, kids see step by step how to write each letter or number. Kids can also learn letters' names as each letter, number, or word is said aloud.



Jake's Never Land Pirate School

Early learners practice using their fingers and hands as they trace shapes, count, and follow directions. They can also tap out pirate drumbeats or use a spyglass to discover treasure while learning basic math skills. Fit kids' photos onto a cartoon pirate body to personalize the game.



Tozzle - Toddler's favorite puzzle

Assembling jigsaw puzzles by matching colors and shapes can be a great way to help kids coordinate their hands. In some, kids hear letters read aloud when they put pieces in the right place. Puzzles have a range of levels and options to customize.



- Fun tools like these can help kids overcome motor challenges that make using a pencil or crayon difficult. Once kids have mastered critical skills using digital products like these, try going back to paper and pencil to practice the same skills in a different way.
- Active Life: Magic Carnival and other games that have a movement sensor provide amazing alternatives for kids who have difficulty walking and running. Even if kids have trouble competing on the soccer field, they can still play games with friends and win.
- Early fine motor skills like writing letters and drawing require that kids use their hands and eyes together. Help kids learn hand-eye coordination by playing games like *Jake's Never Land Pirate School* at school and at home and *I Spy* in the car on the way there.

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These digital picks help kids improve fine and gross motor skills as they move their bodies in new ways and develop more independent movement. As kids learn to make their hands, arms, and legs move in more controlled ways, they can use these products to begin to apply their newly learned skills.



Dexteria - Fine Motor Skill Development

Help kids grow in hand-finger coordination and writing skills. Kids practice tapping, pinching, and writing on the touch screen in order to build hand and finger strength, control, and dexterity. This app is specifically designed for kids with fine motor challenges.



DLTK's Crafts for Kids

Fun craft ideas help kids gain lots of basic fine motor skills — like drawing, cutting, coloring, and assembling craft projects. In addition to ABCs and 123s, there are crafts for holidays, cultures, and much more. There's no shortage of activities that combine learning fine motor skills with fun.



Doodle Buddy for iPad - Paint, Draw, Scribble, Sketch - It's Addictive!

Kids with fine motor challenges can choose a color and brush and finger-doodle to develop better finger and hand control. There are lots of stamps and backgrounds, plus a glitter effect that will dazzle. Kids can use options to doodle over a photo, save their doodles, and send them via email.



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DotToDot numbers & letters

This dot-to-dot app can be customized for each user. Depending on kids' motor challenges, they either touch the dots individually or drag their finger between dots. As they complete the puzzle, the app celebrates their success. A great way to develop fine motor skills.



Just Dance: Disney Party

Kids can learn how to dance and move to music with this game which encourages creativity and helps kids get in shape. Introduce kids with motor challenges to a number of dance routines that they can imitate in order to improve their own motor skills. Or they can dance to their own choreography.



Music Sparkles - All In One Musical Instruments Collection HD

From piano to electric guitar — kids just tap and play. Kids will enjoy fun sparkle graphics as they make new melodies. With the many musical instruments to choose from, kids can get lots of practice developing their sense of musical pitch along with their fine motor skills.



- Have a dance-off. *Just Dance: Disney Party* is a great way to bond during family reunions or parties. Mix up the teams so that kids with motor challenges are included, and face off for some healthy competition.
- Once kids have developed some skill with DotToDot Numbers & Letters, use activities from DLTKS
 Crafts for Kids to reinforce their new skills with pre-made templates.
- Use the *Doodle Buddy* option to doodle over a photo and send it by email to friends and family. Kids can give themselves a silly new hairdo and send the photo to Grandma to spark smiles all around as they practice fine motor skills.

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For kids who have motor challenges, improving their fine and gross motor skills is important as they move their bodies in new ways and use their developing skills for playing, writing, and sports. Kids can use these fun products to practice already developed motor skills or to do more complex physical tasks.



Crazy Formula

Make the formula pass through all the lab tubes until it gets to its final destination. To get it there, kids have to align all the lab tubes in the correct position. Kids will find this an engaging way to practice fine motor and visual skills for writing and hand control.



Sports Champions 2

Kids learn about sports and healthy movement and practice motor skills in this polished collection of quick sports simulations. They'll become better acquainted with rules, strategies, and techniques as they perform movements that imitate those of actual athletes.



The Toymaker

Kids develop cutting, pasting, and coloring skills as they learn to make paper toys to use in imaginative play. Instructions to fold, cut, and glue the free, beautifully decorated paper designs help kids use their fine motor skills in creative and innovative ways.



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Tiny Fish

In this cartoon action game, kids tilt the device in order to guide the fish and survive. Tiny Fish must escape from the toxic ocean, eat cookies, and avoid looming predators like the urchin fish. Just try to survive in these lethal waters! A great game for improving two-hand coordination.



uDraw Studio: Instant Artist

Imagine a virtual art studio that lets kids create art with everything from paints and crayons to chalk and buckets of paint. Kids build their art skills and practice motor skills essential for creative expression, school, and life.



Wii Fit Plus

Practice motor skills and learn new ones with a personalized workout. Kids can design the workout to target hands, legs, or core muscles. If kids have motor challenges, they can build coordination based on their individual needs and have fun working out at the same time!



- The best way to practice fine motor skills is to use them in real life activities. Help kids label their own clothes, books, and games while they practice their writing skills.
- Kids can use projects from The Toymaker website to make simple gifts for friends, family, and teachers. This is a great way to practice skills like cutting, pasting, and coloring while doing something nice for others at the same time.
- Turn the idea behind *Tiny Fish* into a fun bathtub game with floating bathtub toys and a flat plastic plate and a bowl. Kids make the fish float from the plate into the bowl for some fun water play and some great practice with two-handed coordination.