

# Cortical Vision Impairment (CVI)

## iPad Apps

Children/students with Cortical Vision Impairment (CVI) oftentimes have unexplained vision loss. They may have normal or near/normal eye examinations but are still unable to see normally. This type of loss is attributed to neurological damage in the visual centers and pathways of the brain that are responsible for making sense of what the eye might see. Children/students with CVI often display unique visual characteristics including: color preference (often prefer to look at red or yellow items), see best when there is movement, are attracted to light, and have problems seeing material that is complex and seeing in complex environments. This means the material/environment is too cluttered and the environment is too noisy which adversely impacts their ability to use their vision. There are several iPad applications (apps) that can be used to provide for less complex/simple backgrounds, isolated figures in preferred colors of red or yellow and include the use of movement. Also, since the iPad screen produces light, it may be useful to put whatever you want the child/student to look at on its surface to draw their attention to it.

Provided below are some favorite iPad apps recommended by Bridget Bailey (Developmental Specialist/Vision Specialist for CVI), from the "Babies with iPads" blog spot. Bridges posted 10 of her favorite apps for children with CVI which she uses primarily with infants and toddlers in the later part of Phase I or in Phase II of the CVI ranges (for additional information on the ranges of CVI, refer to the topic pages titled "Cortical Vision Impairment (CVI): A Leading Cause of Vision Impairment in Children," "Cortical Vision Impairment (CVI): Interventions for Phase I," and "Cortical Vision Impairment (CVI): Interventions for Phase II" which are available from the Center for Disabilities Deaf-Blind Program online at <<http://www.usd.edu/medical-school/center-for-disabilities/deaf-blind-program-topic-pages.cfm>>. She also recommends using the free light box apps (i.e. LED Light Box and free flashlight, since children/students with CVI are attracted to light. The iPad apps recommended by Bridget are listed below.

- **Sparkabilities Babies 1 HD** by Bottle Rocket
- **Tap-n-See Zoo** by Little Bear Sees (first app created specifically for children with CVI)
- **Baby Rattle Toy** by SelenaSoft, Inc.
- **Peekaboo: Ladybird Baby Touch** by Penguin Books
- **iLoveFireworks** by Fireworks Games
- **Bloom HD** by Opal Limited
- **Baby Screen** by Planet Sloth
- **ShapeShifter HD** by Transform Games
- **Bright Start Baby - A Bright Start for Smart Babies** by Eieio Software (for IOS)
- **Hatch! Plus** by Phodder (for iPod/iPhone)

When using an iPad with children/students with CVI, take into consideration the following:

- **Mounts and Stands** - Rather than using the iPad table top, some children/students benefit from other mounts/stands that allow them to see/touch the iPad more easily. It is also important to determine the best position for the iPad taking into consideration their best line of vision (see below for additional information).

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[www.usd.edu/cd](http://www.usd.edu/cd)

This document is available in alternate format upon request.

- Body Positioning - It can be difficult to maintain an upright position and use vision at the same time. Some Children see best when they do not have to focus on maintaining an upright position.
- Lighting and Glare - These can be controlled both with the iPad and room lighting.
- Durable Case - Check out this website on the Friendship Circle Blog - Special Needs Resources for Parents and Educators for a list of possible options: <<http://www.friendshipcircle.org/blog/2012/02/07/13-ipad-cases-for-you-child-with-special-needs/>>.

Taking into consideration the child's/student/s unique characteristics related to CVI, there are several iPad apps that can be used for a variety of purposes (i.e. entertainment, social interaction, and learning) while building visual behavior at the same time. Provided below are a list of skill areas that could be addressed when using the iPad with a child with CVI.

- Visual Attention
- Visual Engagement
- Reaching and Looking
- Looking and Touching at the Same Time
- Cause and Effect
- Turn Taking
- Communication
- Choice Making

Use of the iPad for children with CVI has been supported through past and ongoing research by Muriel Saunders from the University of Kansas. (Research Matters - iPad and Cortical Vision Impairment which can be found online at <<http://www.researchmatters.ku.edu/2012/march/ipad.shtml>>.

#### References

Babies with iPads at <<http://www.babieswithipads.blogspot.com/>>

California Deaf-Blind Services at <<http://www.cadbs.org/news/gloria-the-ipad-and-apps-for-children-with-cvi/>>

Sneak Outside the Box: iPad Positioning Tips for Children with Visual Impairment at <<http://sneakotb.squarespace.com/sneakotb/?month=april-2012>> - scroll down for the article on positioning tips.

The following resources are from the Perkins School for the Blind are webinars presented by Eric Jerman, M.Ed., COMS (who also has a son with CVI).

Absolutely Engaging, Part I at <[https://secure2.convio.net/psb/site/Ecommerce/1415386984?VIEW\\_PRODUCT=true&product\\_id=8941&store\\_id=1641&\\_\\_utma=184864936.1130044475.1313521306.1357165642.1357244289.9&\\_\\_utmb=184864936.7.10.1357244289&\\_\\_utmc=184864936&\\_\\_utmx=-&\\_\\_utmz=184864936.1355783208.7.1.utmcsr=\(direct\)|utmccn=\(direct\)|utmcmd=\(none\)&\\_\\_utmv=-&\\_\\_utmk=235170177](https://secure2.convio.net/psb/site/Ecommerce/1415386984?VIEW_PRODUCT=true&product_id=8941&store_id=1641&__utma=184864936.1130044475.1313521306.1357165642.1357244289.9&__utmb=184864936.7.10.1357244289&__utmc=184864936&__utmx=-&__utmz=184864936.1355783208.7.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none)&__utmv=-&__utmk=235170177)>

Absolutely Engaging, Part II at <[https://secure2.convio.net/psb/site/Ecommerce?VIEW\\_PRODUCT=true&product\\_id=8821&store\\_id=1641&\\_\\_utma=184864936.1130044475.1313521306.1357165642.1357244289.9&\\_\\_utmb=184864936.6.10.1357244289&\\_\\_utmc=184864936&\\_\\_utmx=-&\\_\\_utmz=184864936.1355783208.7.1.utmcsr=\(direct\)|utmccn=\(direct\)|utmcmd=\(none\)&\\_\\_utmv=-&\\_\\_utmk=163334588](https://secure2.convio.net/psb/site/Ecommerce?VIEW_PRODUCT=true&product_id=8821&store_id=1641&__utma=184864936.1130044475.1313521306.1357165642.1357244289.9&__utmb=184864936.6.10.1357244289&__utmc=184864936&__utmx=-&__utmz=184864936.1355783208.7.1.utmcsr=(direct)|utmccn=(direct)|utmcmd=(none)&__utmv=-&__utmk=163334588)>