

Creating Books for Students With Cortical Visual Impairment (CVI)

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Introduction

With the right materials and steps, it can be easy to create handheld books for students with CVI. This manual includes an overview of students' needs in the three phases of CVI as well as examples of books to adapt for students.

Phase I

In Phase I of CVI, students require materials of a single color to be presented against a black background in a quiet environment without any sensory distractions.

- Objects should be placed within 16 inches of the student, within their preferred field. Room lighting may need to be reduced.
- Objects should be familiar to students and have movement and/or reflective properties.
- Students should be allowed extended time to interact with materials.
- It is important to go through each student's daily schedule and build vision activities throughout the student's day.

Phase II

In Phase II of CVI, challenge students by introducing a new color in addition to a preferred color (you can try adding two or more colors later).

- Be aware that latency will continue to be present but decreased throughout Phase II.
- Complexity must be controlled, but students can tolerate more patterns on three-dimensional objects.
- Promote visually guided reach by placing objects on black or plain backgrounds.

Phase III

In Phase III, highly complex environments are tolerated but will continue to affect the student's visual performance.

- Reduce information when it is presented to students in two dimensions.
- Highlight or outline salient features in symbols and images.

CVI Book Adaptation Example 1: The Mitten

Students who are not yet ready for images (Phase I or II):

Materials Needed:

- The Mitten by Jan Brett
- Invisiboard from APH (catalog number 1-08541-00)
- A mitten
- Other tangible objects that represent characters (e.g., stuffed fox, owl, rabbit)

Instructions:

1. Gather all tangible objects that represent the book's characters (Figure 1).
2. Put the mitten on your hand and tell the story with the objects, using the Invisiboard to eliminate distractions. Have students place objects in the mitten as you read the story.



Figure 1. Object representing characters from The Mitten.

Students who are ready for images (Phase II or III):

Materials Needed:

- The Mitten by Jan Brett
- Card stock paper
- Black or white paper
- Invisiboard from APH (catalog number 1-08541-00)
- Low-glare laminate, available via the [GBC Office website](http://gbcoffice.com/us/us/home) (gbcoffice.com/us/us/home)
- A mitten

Instructions:

1. Scan all pages from The Mitten.
2. Print the pages onto card stock.
3. Cut out only the image of the object you need and glue it to a non-complex background, usually white or black paper (Figure 2).
4. Laminate the paper using low-glare laminate.
5. Put the mitten on your hand and tell the story with the images, using the Invisiboard to eliminate distractions. Have students place images in the mitten as you read the story.



Figure 2. Laminated images of characters scanned from a hard copy of The Mitten.

Activity Extension

If a recording of the book you are adapting is available via YouTube, convert the recording to an mp3 file. Alternatively, you can record yourself reading the book and save it as an mp3 file. Students may listen to the recording independently using a Joy Player or other player of choice. Additionally, you can use a storybook builder to include images with the audio.

CVI Book Adaptation Example 2: Gingerbread Man

Materials needed:

- The Gingerbread Man by Karen Schmidt
- Inflatable gingerbread man with on/off switch
- Sensory Learning Kit Power Select from APH (catalog number 1-08612-00)
- Invisiboard from APH (catalog number 1-08541-00)
- Table covered with black fabric
- Low-glare laminate, available via the [GBC Office website](http://gbcoffice.com/us/us/home) (gbcoffice.com/us/us/home)

Instructions:

1. Scan all pages of The Gingerbread Man.
2. Print the pages onto card stock.
3. Cut out only the image of the object you need and glue it to a non-complex background (usually white or black paper).
4. Laminate the paper using low-glare laminate.
5. Tell the story with the laminated pictures from the book, using the Invisiboard to eliminate distractions (Figure 3).
6. Have the student use a switch to activate the inflatable gingerbread man. Depending on the student's needs and whether the gingerbread man lights up, this can be done with the lights on or off (Figure 4).



Figure 3. Tell the story of the gingerbread man.



Figure 4. Have the student flip the switch to inflate the gingerbread man.

Activity Extension

If a recording of the book you are adapting is available via YouTube, convert the recording to an mp3 file. Alternatively, you can record yourself reading the book and save it as an mp3 file. Students may listen to the recording independently using a Joy Player or other player of choice. Additionally, you can use a storybook builder to include images with the audio.

Create Your Own Story With Elmo

Elmo (or any other well-known children’s character) can be used to work with students in each phase of CVI.

Materials needed:

- Stuffed Elmo toy
- Black binding covers, available from MyBinding.com (mybinding.com/black-16mil-sand-poly-binding-covers.html)
- Low-glare laminate, available via the GBC Office website (gbcoffice.com/us/us/home)
- Black Velcro

For students in Phase I:

1. Print images of Elmo in very simple levels of complexity (no props, etc.).
2. Bind five to six binding covers together and place Velcro on each page to adhere one image of Elmo to each page.
3. When working with the student, position the Elmo doll next to the less complex images on a black background (Figure 5). This will help the student learn the association between objects and images.

For students in Phase II:

1. Print images of Elmo in low levels of complexity (poses, simple props, etc.).
2. Bind five to six binding covers together and place Velcro on each page to adhere one image of Elmo to each page.
3. When working with the student, position the Elmo doll next to the images on a black background (Figure 6). This will help the student learn the association between objects and images.

For students in Phase III:

1. Print images of Elmo in high levels of complexity (poses, patterns, props, etc.).
2. Bind five to six binding covers together and place Velcro on each page to adhere one image of Elmo to each page.
3. When working with the student, position the Elmo doll next to the images on a black background.
4. Gradually build the student’s capacity for locating the figure against more complex backgrounds. For example, present the Elmo doll against a polka-dot background and ask the student to locate Elmo.
5. Introduce images of Elmo with complex backgrounds and ask the student to locate Elmo within the image (Figure 7).



Figure 5. Pose an Elmo doll next to simple images of Elmo on a black background.



Figure 6. Pose an Elmo doll next to more complex images of Elmo on a black background.



Figure 7. Pose an Elmo doll next to very complex images of Elmo on a black background.