



# Texas School for the Blind and Visually Impaired Outreach Programs

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## Self-Determination Units with Lesson Plans

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Developed for

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# Units and Lessons Overview

These units and lessons were developed by Chrissy Cowan and Scott Baltisberger to help teachers of students with visual impairments teach students how to understand the cause and effect of their visual impairments, explain their visual impairment to others, and to advocate for appropriate accommodations. These are important self-determination skills for the student, part the Expanded Core Curriculum .

Following the lessons are a number of forms that may be copied for the student to use in a number of the Unit 2 lessons.

## Unit 1: The Eye and Sight

Lessons

- What is an Eye? (Lesson 1)
- How Does an Eye Work? (Lesson 2)
- Everyone Has Different Eyes – Animals (Lesson 3)
- Everyone Has Different Eyes – People (Lesson 4)
- How is My Eye Special? (Lesson 5)

## Unit 2: Student Toolbox

Lessons

- How Does My Vision Affect My Access to Information?
  - K-2<sup>nd</sup> Grade (Lesson 6)
  - 3<sup>rd</sup>-12<sup>th</sup> Grade (Lesson 7)
  - My Personal Goals (Lesson 8 all grades)
- Strategies for Increasing Access
  - Strategies for Braille Readers (Lesson 9)
  - Strategies for Print Readers (Lesson 10)
  - Strategies for Using Audible Materials (Lesson 11)
- Strategies for Communicate with Others about Access
  - Personal Preferences for Access to Visual Media (Lesson 12)
  - Creating a Product to Communicate Visual Strategies/Tools with Teachers (Lesson 13)

## Materials for Unit 2



# Self-Determination Lesson Plans

## Unit 1: The Eye and Sight

### Lesson 1: What is an Eye?

**Unit Goal:**

Student will describe how the visual system functions and also the nature of his/her individual visual system (cause of specific visual impairment).

**Lesson objective(s):**

Student will identify all major structures of the eye.

**Teaching procedures/steps:**

Step	Actions	Vocabulary
Anticipatory	Ask student to think about how they get information from the environment. Guide toward naming body parts that take in sensory information - ears, tongue, fingers, nose, eyes.	The five senses: hearing, smelling, tasting, touching, seeing
Introduction	"Today we will talk about one of those body parts: The Eye." "Can you name any of the parts of the eye?" Allow student to name any parts he/she can.	
Stating the Goal	"After our lesson, you will be able to show me all the parts of the eye, both inside and outside, and also tell what each part is called."	
Instruction	Using an eye poster or an eye model, point out the different structures of the eye and provide their names. Make sure student repeats the names, pronouncing them correctly. First present exterior structures. Next present interior structures, moving from surface to inside.  * Note: Depending on age and abilities of the student, it may be helpful to omit some structures from the discussion in order to reduce the amount of information and complexity of the task.	Eye brow, eye lash, eye lid, eye ball, sclera, cornea, iris, pupil, lens, anterior chamber, posterior chamber, retina, macula, optic nerve

Step	Actions	Vocabulary
Variation 1	Draw a picture of the eye together, labeling each part as they are drawn. Provide a black line drawing of the eye, color each part as you discuss. Provide a raised line, tactile diagram of the eye.	
Variation 2	<ul style="list-style-type: none"> <li>For a student who is tech savvy, an option would be to provide guided exploration of a web page that has info about the eye to discover the different structures.</li> </ul>	
Check for Understanding	"Now I want to see how many of the parts you can remember." 1. Student uses model or poster to indicate structures and names. 2. Student draws and labels eye. 3. Play the "Eye Game"	
Closure	"Today we've learned all about the different parts of the eye. Each of these parts has a special job that it plays so that vision occurs. Next time we meet, we will talk about what is the job of each part."	

## Rationale:

When a student has specific knowledge about the structure of the eye, he or she can discuss the nature of vision in general, and his or her own specific visual condition with more confidence and ownership.

## Resources and materials:

- Eye poster:
  - [http://www.shopanatomical.com/Human\\_Eye\\_Anatomical\\_Chart\\_p/3b-vr1226uu.htm](http://www.shopanatomical.com/Human_Eye_Anatomical_Chart_p/3b-vr1226uu.htm)
  - [http://www.allposters.com/-sp/The-Eye-Educational-Chart-Poster-Posters\\_i8927150\\_.htm](http://www.allposters.com/-sp/The-Eye-Educational-Chart-Poster-Posters_i8927150_.htm)
  - <https://www.exetereye.co.uk/the-eye/eye-anatomy/>

## Eye model:

- <https://anatomywarehouse.com/search-results-page?q=eye%20anatomy>
- [https://www.3bscientific.com/us/eye-models,pg\\_30.html](https://www.3bscientific.com/us/eye-models,pg_30.html)
- Black line drawing of eye
- Tactile diagram of the eye
- Markers, crayons
- Websites to explore:
  - [http://www.ivyroses.com/HumanBody/Eye/Anatomy\\_Eye.php](http://www.ivyroses.com/HumanBody/Eye/Anatomy_Eye.php)

# Self-Determination Lesson Plans

## Unit 1: The Eye and Sight

### Lesson 2: How does an eye work?

#### Unit Goal:

Student will describe how the visual system functions and also the nature of his/her individual visual system (cause of specific visual impairment).

#### Lesson objective(s):

Student will describe the function of all major structures of the eye and the sequence of events that occur to result in seeing.

#### Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	"Previously we talked about the five different senses, how we get information about our environment and the parts of the body that make use of that sense. We talked about the eye in more detail and learned that it has many different parts, both inside and outside."	The five senses: hearing, smelling, tasting, touching, seeing
Introduction	"Each of the parts of the eye has a special job. Do you know what are the special jobs of any of the parts?"  "All these parts working together create the sense that we call 'seeing'".	
Stating the Goal	"When we finish our lesson today, you we be able to tell me what each part does and how."	
Instruction 1	People use different words to talk about using the eye to get information. Three words that you will hear are: seeing, sight and vision. They all mean the same thing.	Seeing Sight Vision
Instruction 2	The first thing that is needed in order for seeing to happen is a light source. It can be the sun, the moon, a light bulb or a candle.  The light source sends out light rays and the rays bounce off something.	Light source Light rays



Step	Actions	Vocabulary
Instruction 3	<p>Use model, picture, drawing or tactile diagram of the eye to demonstrate pathway of light:</p> <ul style="list-style-type: none"> <li>• Light rays bounce off object and go toward the eye</li> <li>• Through cornea - like window that lets light in but protects inside of the eye</li> <li>• Iris and pupil - controls amount of light that goes inside the eye. Too much light can hurt the eye</li> <li>• Lens - Focuses light</li> <li>• Interior chamber - like a big room, lets light go through</li> <li>• Retina - receives light; is covered with cells (rods and cones) that transfer the light to electrical impulses and sends them to the optic nerve</li> <li>• Optic nerve - carries information to the brain</li> <li>• Visual Cortex - part of the brain that processes electronic information into information that shows us what we see</li> </ul> <p>(It may be fun to practice this several times with the student picking different objects to "see". You could draw a picture of the object together or make up a story about why you need are looking at that particular object.)</p>	<p>Cornea Iris Pupil Lens Interior chamber Retina (rods and cones) Optic nerve Visual cortex</p>
Check for Understanding	<p>"Show me how we would see _____."</p> <p>Using model, picture, drawing or tactile diagram, have student demonstrate the pathway that an image takes along the visual pathway, from the observed object to the visual cortex.</p>	
Closure	<p>"Now we've learned about each part of the eye and the special job each of those parts have to help us see things. Next time we will talk about different kinds of eyes and how each one is special and unique from one another."</p>	

### Rationale:

An understanding of the mechanics of visual perception will allow the student to better understand the nature of his or her own visual condition.

**Note:** Amount of detail presented to the student may vary according to age and/or level of comprehension. For some students, a more simplified version of the visual pathway may be more appropriate. Other students may benefit and enjoy learning about additional structures.

### Resources and materials:

- Eye poster:
  - <https://www.amazon.com/Eye-Anatomical-Chart-Company/dp/1587791269>
  - [http://www.allposters.com/-sp/The-Eye-Educational-Chart-Poster-Posters\\_i8927150\\_.htm](http://www.allposters.com/-sp/The-Eye-Educational-Chart-Poster-Posters_i8927150_.htm)

- <https://www.exetereye.co.uk/the-eye/eye-anatomy/>
- Eye model:
  - <https://anatomywarehouse.com/giant-eye-anatomy-model-11-parts-a-100506>
  - [https://www.a3bs.com/eye-models,pg\\_30.html](https://www.a3bs.com/eye-models,pg_30.html)
- Black line drawing of eye
- Tactile diagram of the eye
- Markers, crayons
- Websites to explore:
  - [http://www.ivyroses.com/HumanBody/Eye/Anatomy\\_Eye.php](http://www.ivyroses.com/HumanBody/Eye/Anatomy_Eye.php)
  - <https://www.youtube.com/watch?v=syaQgmx5i0> - Animated short that describes structures and function of the eye
  - <http://kidshealth.org/kid/htbw/eyes.html> - Article about the eye. Includes audio version of the article.

# Self-Determination Lesson Plans

## Unit 1: The Eye and Sight

### Lesson 3: Everyone Has Different Eyes - Animals

#### Unit Goal:

Student will describe how the visual system functions and also the nature of his/her individual visual system (cause of specific visual impairment).

#### Lesson objective(s):

Student will identify how the eyes of at least four different animals function, how they are similar to one another and how they are different.

#### Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	"Today we're going to learn more about eyes. Can you show me the parts of the eye and tell me what they do?" (Student uses materials to name parts and describe visual pathway)	
Introduction	"What are some things that have eyes?" (Student names animals or bugs that have eyes.) "Have you noticed anything that is different about different animals' eyes?" (Student names differences. May include size, color, position, etc.) Let's look at a few different animals and learn about some other ways that each animal's eyes are unique."	
Stating the Goal	"After our lesson today, you will be able to tell how the eyes of animals are different and why they are different."	
Instruction 1	Collect pictures of several animals and also (if possible) of that animal's eye. You can present these in a booklet form or as separate sheets of paper. Look at the pictures and let the child identify the animal. Talk about the animal's environment and behavior. Talk about how each animal's eyes are different because they are used in different ways.	Environment Behavior
Instruction 2	Obtain one of the books about animal eyes (see "Resources" below). Read book together and discuss the information.	
Instruction 3	Explore websites that provide information about animal eyes (see "Resources"). Discuss each animal, its behavior, environment and eyes in more detail.	

Step	Actions	Vocabulary
Some examples of animal eyes	<p>Box jellyfish has 24 eyes.</p> <p>Camels have three eyelids.</p> <p>Squid have eyes 27 centimeters across.</p> <p>Dogs can't distinguish between red and green.</p> <p>Goats have square pupils.</p> <p>Owls can't move their eyes, that is why they swivel their head at almost 360 degrees.</p> <p>Worms don't have any eyes.</p> <p>Chameleons can move each eye in different directions at the same time.</p> <p>Rattlesnakes can see infrared heat signatures of other animals.</p>	
Check for Understanding	<ul style="list-style-type: none"> <li>• Child writes the names of four different animals and what is special about the eyes of each one.</li> <li>• Child draws pictures of four animals and also a picture of their eyes, showing what is special about each.</li> <li>• Play game with cards: Name or picture of animal on one set of cards, picture of or description of eyes on other set of cards. Child matches.</li> </ul>	
Closure	<p>“There are all different kinds of eyes in the world. They come in all shapes, sizes and colors and they do different things. It is natural that the eyes of different animals are different. One eye is not better than the other; each is good for its purpose. Next time, we'll talk about how people's eyes can be different too.”</p>	

**Rationale:**

By studying the eyes of animals, which show great variation, the student will understand that diversity in eyes is common and normal. This understanding will enable the student to approach the concept of differences among human eyes as completely natural phenomena. This, in turn, will reduce feelings of being "different" from others due to having a visual impairment.

**Note:** Amount of detail presented to the student may vary according to age and/or level of comprehension. For some students, a more simplified version of the visual pathway may be more appropriate. Other students may benefit and enjoy learning about additional structures.

**Resources:**

Books

- *Eye to Eye: How Animals See the World* by Steve Jenkins

- *Animal Eyes* by Mary Howland
- *Animal Eyes* by Daisy Griffin

#### Web

- "Animal Eyes" <https://www.aao.org/museum/exhibition-detail/remarkable-women-american-women-in-ophthalmology-c>
- Museum of the Eye <https://www.aao.org/museum-of-the-eye>
- Photography website with close-up photos of various animal eyes  
<http://www.surenmanvelyan.com/eyes/animal-eyes/>
- "Seeing Through Animal Eyes" [https://nautil.us/seeing-through-animal-eyes-509263/?\\_sp=1cfc0cbe-6a68-4c1b-8a86-6b4f0402dc39.1718829250851](https://nautil.us/seeing-through-animal-eyes-509263/?_sp=1cfc0cbe-6a68-4c1b-8a86-6b4f0402dc39.1718829250851)
- "Eye Shapes of Animals Hint at Differences of Our Lifestyles". National Public Radio. Includes transcript and audio.  
<http://www.npr.org/sections/health-shots/2015/08/07/430149677/eye-shapes-of-the-animal-world-hint-at-differences-in-our-lifestyles>
- Lists of Animal Eye Facts
  - <https://discoveryeye.org/32-facts-about-animal-eyes/>
  - <https://www.nhm.ac.uk/discover/amazing-eyes-vision-champions.html>

# Self-Determination Lesson Plans

## Unit 1: The Eye and Sight

### Lesson 4: Everyone Has Different Eyes - People

**Unit Goal:**

Student will describe how the visual system functions and also the nature of his/her individual visual system (cause of specific visual impairment).

**Lesson objective(s):**

Student will identify at least four ways in which human eyes differ from one another.

**Teaching procedures/steps:**

Step	Actions	Vocabulary
Anticipatory	<p>Review the parts of the eye and the visual pathway. Use a model or diagram or draw a picture.</p> <p>Discuss some of the interesting things learned about the eyes of animals. How are they different and why are they different?</p>	
Introduction	<p>Discuss some of the interesting things learned about the eyes of animals. "How are they the same and how are they different? Why are they different?"</p> <p>"Just like there are differences between the eyes of different animals, the eyes of different people can also be different."</p>	
Stating the Goal	<p>"We will learn about some of the ways that the eyes of people can be different. You will be able to tell me five different ways that our eyes are unique."</p>	
Instruction	<p>You may want to together read one of the books (see "Resources" below) that address visual differences in people and use this as an introduction to the concept.</p> <p>Ask student to think about the eyes of peers and adults. What do they notice are some things that are different?</p> <p>Some things that a student might notice:</p> <ul style="list-style-type: none"> <li>• Color (iris)- brown, blue, green, black, yellow, hazel, etc.</li> </ul>	<p>Iris</p> <p>Pupil</p> <p>Epicanthic fold - affects shape of eye</p>

Step	Actions	Vocabulary
	<ul style="list-style-type: none"> <li>• Size - big, small, tiny, etc.</li> <li>• Shape - round, oval</li> <li>• Glasses - some have them, some don't. Different kinds of glasses.</li> <li>• Blinking - Blinking, rubbing, other behaviors associated with eyes.</li> <li>• Droopy - eyelids</li> <li>• Eye contact - don't like to look at you</li> </ul> <p>Other things you might bring up:</p> <ul style="list-style-type: none"> <li>• Acuity - Some students are able to see things that are far away. Some kids can see things that are near.</li> <li>• Field - Some students might tend to trip or not see things that are on the floor or off to one side.</li> </ul>	<p>Acuity Fields Eye contact</p>
Check for Understanding	<ul style="list-style-type: none"> <li>• Student draws a picture of people, including their eyes, including information that illustrates what makes each one both unique and similar.</li> <li>• Student makes a list or chart, such as a Venn diagram, of types of eyes and how they are the same and how they are different.</li> <li>• Teacher and student discuss the student's product.</li> </ul>	
Closure	<p>"Now we know how eyes can be different, not only between different types of creatures but also between different people. We see that these differences are very common and very natural."</p>	

**Rationale:**

When a student understands that it is natural for there to be variation in the structure and function and behavior of the eyes of different individuals, it will allow them to view his or her own visual condition as natural and no more or less than that of their peers.

**Resources:**

- Books
- *Arthur's Eyes* by Marc Brown
- *Does an Owl Wear Eyeglasses?* by Harriet Ziefert
- *Jacob's Eye Patch* by Beth and Jacob Shaw

# Self-Determination Lesson Plans

## Unit 1: The Eye and Sight

### Lesson 5: How is MY Eye Special?

**Unit Goal:**

Student will describe how the visual system functions and also the nature of his/her individual visual system (cause of specific visual impairment).

**Lesson objective(s):**

Student will describe the nature of his or her visual impairment, including the specific structures that are affected and how this impacts how he/she sees.

**Teaching procedures/steps:**

Step	Actions	Vocabulary
Anticipatory	<ul style="list-style-type: none"> <li>• Review parts of the eye.</li> <li>• Discuss differences and similarities that can be found among eyes in both the animal and human worlds.</li> </ul>	
Introduction	<p>“We've learned that eyes are similar in many ways but also that eyes can have many differences and that this is a natural thing. Today, let's talk about our own eyes and what might be special about them.”</p>	
Stating the Goal	<p>“Once we are finished with today's lesson, you will be able to tell people all about your own eyes and your own vision.”</p>	
Instruction	<ul style="list-style-type: none"> <li>• The content of this lesson will, of course, be very individualized according to the nature of the student's visual impairment.</li> <li>• Using an eye model, chart or drawing, point out structures that are affected by the student's etiology.</li> <li>• Demonstrate the path that light takes through the visual system, noting how the affected structures in turn affect what the student sees.</li> </ul>	<p>Vocabulary will be specific to the student's visual impairment.</p>
Instruction	<ul style="list-style-type: none"> <li>• You may want to introduce a term, such as "visual impairment" at this time, explaining that it is used to indicate when an individual's vision is different from that of most other persons.</li> <li>• Alternatively, you might want to wait and present this concept as a separate lesson during the "History" or "Rights" Units.</li> </ul>	<p>visual impairment extraordinary vision atypical vision</p>



Step	Actions	Vocabulary
		different vision
Instruction	<ul style="list-style-type: none"> <li>• Locate a website with information specific to the student's visual impairment and explore it together.</li> <li>• Obtain a book that addresses the visual impairment and read together.</li> <li>• Create your own booklet using information from a website to explore together.</li> </ul>	
Check for Understanding	<ul style="list-style-type: none"> <li>• Using a model or chart of the eye, student independently demonstrates part of the eye affected by visual impairment and how this, in turn affects vision.</li> <li>• Student draws a picture of her eye and writes a short paper or paragraph that describes their visual impairment.</li> </ul>	
Closure	<p>“Sometimes our friends or our teachers might not understand why you are not able to see certain things in the same way that they see them. Knowing how your vision is special can help you explain it to them. In the future, we will talk about some more ways that we can help other people better understand your special vision (visual impairment).”</p>	

**Rationale:**

Having the knowledge of how his or her own eyes function, and the vocabulary to talk about it, will enable the student to better advocate for him- or herself with peers and adults.

**Note:** The amount and type of information presented in this lesson will vary to a great degree based not only on the student's visual impairment but also his/her age and grade level.

**Resources:**

Websites

- Albinism - <https://kidshealth.org/en/teens/albinism.html>

Books

- *My Fair Child* by Maureen Ryan (albinism)
- *Albino Animals* by Kelly Milner Halls

## Self-Determination Lesson Plan

### Unit 2: Student Toolbox

#### Lesson 6: K-2<sup>nd</sup> Grade - How Does My Vision Affect My Access to Information?

##### Unit Goal:

Student will develop a set (toolbox) of strategies to optimize visual functioning in a variety of settings.

##### Lesson objective(s):

Student is able to express vision strengths and limitations in relation to school, community, and home activities.

##### Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	Ask the student to think about things he likes to do or need to do at home, at school, and in community settings (like the grocery store, at a park, etc.). As the student names activities and/or objects, ask how easy or difficult it is to see clearly.	community
Introduction	“Your vision may affect how you do things. There are probably many things you can do on your own, like brush your teeth or eat a meal; then there are things you might need a little help with seeing or doing, like using a microwave or crossing a street; or maybe there are things that are just too difficult for you to see, like words written on a board or menus in a restaurant. We are going to figure out the things you can see/do on your own, things you ask others to help you with, and things you just can see/do at all. Once we fill in this list, we are going to work at finding out ways to help you become more independent—or do things without too much help from others.”	
Stating the Goal	“After our lesson, you will have a list of the activities and things you can see on your own or with an optical device, and things you could work on to see without the help of others with a little more instruction.”	
Instruction	Introduce the worksheet “How I View the World”. Using the worksheet as a guide, create a list of activities and things the student can see without help or with an optical device, things he asks others to help with, and things he cannot see at all.	Optical device

Step	Actions	Vocabulary
Instruction	Ask the student to select some items on the worksheet that (s)he would like to see better or be able to access. Discuss the possibility of increasing independence and participation once (s)he can improve access skills. Note: for the functionally blind student, “see” may mean “figure out” or “do” through tactile strategies.	Access Independence
Check for Understanding	“Let’s look back over your list. (read list to the student) Is there more you would like to add?”	
Closure	“Today you listed activities and things you can see on your own or with an optical device. There are also some things/activities you need someone else to help you with. We are going to be working on ways in which you can access as many things on your own (independently) as possible, without depending on others.”	

**Rationale:**

This lesson is designed to begin a conversation with the student about building independence. There will be some items the student mentions that you feel could be topics for future lessons. For example, “I can’t see the teacher when she writes on the board”, may lead to a future lesson on the devices needed to read the board, and how to politely advocate for yourself when you can’t see something. Make sure home, school, and community settings are addressed. Student may need prompting on typical activities for all three settings. Avoid questions such as, “Can you see \_\_\_\_\_?” Rather, say “Tell me how you see \_\_\_\_\_.”

**Materials:**

*How I View the World* worksheet. If the student’s handwriting is slow/laborious, the teacher can fill this in as the student dictates.

# Self-Determination Lesson Plan

## Unit 2: Student Toolbox

### Lesson 7: Grades 3-12 - How Does My Vision Affect My Access to Information?

#### Unit Goal:

Student will develop a set (toolbox) of strategies to optimize visual functioning in a variety of settings.

#### Lesson objective(s):

Student is able to express vision strengths and limitations in relation to school, community, and home activities.

#### Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	Ask the student to think about things he needs to do in his home, at school, and in community settings (like the grocery store, at a park, etc.) that typically require vision. As the student names activities and/or objects, ask how easy or difficult it is to see or perform these tasks.	
Introduction	“Your vision may affect how you do things. We are going to complete a survey of visual tasks to figure out just how hard or easy visual tasks can be for you. Once we fill in this survey, we are going to work at finding out ways to help you become more independent—or do things without too much help from others.”	
Stating the Goal	“After our lesson, you will have an idea of visual tasks you need to be able to access in home, school, and community settings. When you are finished with the Visual Tasks Survey, your score will help us determine which skills we can begin to work on to increase your self-confidence and independence in these settings.”	access

Step	Actions	Vocabulary
Instruction	<p>Introduce the “Visual Tasks Survey”. Review the instructions, including the scoring rubric.</p> <ol style="list-style-type: none"> <li>1. Allow student to complete this survey.</li> <li>2. Total the score and find the range at the bottom of the survey.</li> <li>3. If the score is between 22 and 88, discuss some tools and strategies that could be used with individual items to increase independence and participation. Make a list of these tools/strategies specific to each task. Future lessons will involve training for specific tools/strategies to increase access, independence, and self-confidence.</li> <li>4. Review “Tools for Accessing Different Environments and Increasing Self-Sufficiency” to see which might apply to the student.</li> </ol>	assistive technology
Instruction	<p>If the score is between 22 and 88, discuss some tools and strategies that could be used with individual items to increase independence and participation. Make a list of these tools/strategies specific to each task. Future lessons will involve training for specific tools/strategies to increase access, independence, and self-confidence.</p>	
Check for Understanding	<p>“Let’s look back over your survey. What areas (of access) do you feel are your strengths? What areas do you feel you need to work on to increase your access/independence?”</p>	
Closure	<p>“Today you took a close look at typical visual tasks that occur in school, at home, and in the community. In future lessons, we are going to be working on skills to help you access as many things on your own (independently) as possible, without depending on others.”</p>	

### Rationale:

This lesson is designed to begin a conversation with the student about building access to visual tasks and independence. Future lessons will build upon how the student answered each individual task rating, and might include instruction on the tools/strategies that would help the student gain independence on specific tasks. Access skill instruction will differ, depending on many factors, such as the student’s visual acuity, stamina, availability of assistive technology, etc. It is important to note that, as a student’s ability to access tasks increases, his self-confidence and ability to represent himself as a person with a visual impairment who can compete with his peers increases as well.

### Materials:

- Document: *Visual Tasks Survey*
- Document: *Tools for Accessing Different Environments and Increasing Self-Sufficiency*

- Calculator

**Resources:**

*Looking to Learn* (AFB Press) for teaching optical devices

TSBVI website for teaching specific [assistive technology skills](#)

*ECC Essentials, Teaching the Expanded Core Curriculum to Students with Visual Impairments*, Allman C.B., and Lewis, S., AFB Press, 2014. Available from [Amazon](#).

## Self-Determination Lesson Plan

### Unit 2: Student Toolbox

#### Lesson 8: My Personal Goals - How Does My Vision Affect My Access to Information?

**Unit Goal:**

Student will develop a set (toolbox) of strategies to optimize functioning on visual tasks in a variety of settings

**Lesson objective(s):**

Student is able to express vision strengths and limitations in relation to school, community, and home activities.

**Teaching procedures/steps:**

Step	Actions	Vocabulary
Anticipatory	Ask the student to think about what his special interests are. What skills might be needed within these special interests?	Personal goal
Introduction	“Sometimes it helps to clarify your personal goals in order to figure out the tools and strategies you will need to accomplish these goals. A personal goal can be short-term, like walking to a friend’s house independently; or, longer-term, like finding a part-time job. In this lesson we will explore these goals and figure out the steps you would need to take, tools and strategies you would need to use, and supports and resources that will help you reach your goals.”	Tools Strategies
Stating the Goal	“This lesson will help you clarify your personal goals related to leisure activities, recreation, school, independent living skills, and/or career pursuits.”	
Instruction	<ol style="list-style-type: none"> <li>1. Ask the student to complete #1 on the <i>My Goals</i> worksheet.</li> <li>2. Discuss #2 on the worksheet together.</li> <li>3. Create a document for #3, listing the steps the student would need to take to achieve one or each of the three goals.</li> <li>4. Create a document for #4, listing supports and resources to complete the steps listed in #3. Supports and resources may be technology, people, or agencies.</li> </ol>	Supports

Step	Actions	Vocabulary
Check for Understanding	Check to make sure the student’s goals are realistic and achievable in a relatively short amount of time.	
Closure	“Today we’ve selected 3 goals you would like to work on (restate the goals). You have identified supports and resources to help you reach these 3 goals. For our next few lessons we will start taking the steps necessary to help you achieve your goals.”	

**Rationale:**

The intent of this lesson is to get the student to think about setting goals and learning the visual strategies and/or accommodations he might need to achieve these goals. The assumption is that learning the skills needed to accomplish one’s goals contributes to self-determination. Goals may be short term, such as walking unassisted to a friend’s house or preparing a meal; goals may be longer term, such as something related to work, or going to college. A standard interest inventory may help the process of figuring out the students interests, which could then be followed by a conversation about goal setting.

**Materials:**

- *My Goals* worksheet

**Resources:**

Look for interest inventories on Pinterest (<https://www.pinterest.com/explore/student-interest-inventory/>)

Look for student goal setting worksheets on Pinterest (<https://www.pinterest.com/wileyteaching/goal-setting/>)



**Self-Determination Lesson Plan**  
**Unit 2: Student Toolbox**  
**Lesson 9: Strategies for Increasing Access - Strategies for Braille Readers**

**Unit Goal:**

Student who are using braille will develop a set of strategies (toolbox) to optimize functioning on visual tasks in a variety of settings

**Lesson objective(s):**

Student is able to efficiently use strategies and assistive technology to increase independent access to visual tasks. Strategies might include using a braille device, audible materials, tactile materials, assistive technology, and/or working with a partner

**Teaching procedures/steps:**

Step	Actions	Vocabulary
Anticipatory	Ask the student to describe the kinds of learning activities he needs to complete in any given class. (e.g., copy/read near and distance materials, give a speech, read from a textbook/work sheet, complete a written assignment, read charts/maps/graphs). Tell the student you will be working together to develop ways to complete these typical classroom activities using a variety of tools and strategies.	Tools Strategies
Introduction	“We are going to be looking at the tools, such as assistive technology devices you have that help you participate in classroom activities, and the strategies (ways of getting things done). We’ll see how well these are working for you, and look at ways to increase your proficiency with these tools and strategies. We’ll also try to determine if there are additional tools/strategies that might work better for you.”	
Stating the Goal	“This lesson will help you learn strategies to optimize functioning on visual tasks in a variety of settings.”	

Step	Actions	Vocabulary
Instruction	<ol style="list-style-type: none"> <li>1. Begin by writing down the learning activities the student named (see Anticipatory). Add to this as needed.</li> <li>2. Ask the student to show you the equipment he uses for braille, as well as any AT he uses for access to auditory materials. Determine student's proficiency on each piece of equipment, including telling you the kinds of activities he is able to do with each piece.</li> <li>3. Complete the "My Strategies" worksheet</li> <li>4. Make a list of each class the student attends. Using the results of the "My Strategies" worksheet, ask which of these tools/strategies he uses for each individual class. Are there any problem areas? Are there things he is currently not able to access at all?</li> <li>5. Ask him to select a visual task (from the left column) to begin to "fine tune", given the AT equipment issued.</li> <li>6. Begin to work on strategies for using technology to access individual visual tasks. Some of these strategies will involve braille AT, and some will involve auditory AT. Each strategy will require initial assessment (what does the student already know) and instruction (how can the student use this equipment to access this particular activity). A great resource for braille-access skills can be found on pp. 193-195 and pp. 197-201 in <i>ECC Essentials</i>. A resource for auditory access skills and technology can be found in chapters 4-5 in <i>Learning to Listen, Listening to Learn</i>.</li> <li>7. Create a document or other product (i.e., PowerPoint) that can be shared with others and gives access details across the curriculum.</li> <li>8. Begin to explore access outside the school, and how the same tools could be used to access recreational and career-related activities.</li> </ol>	MP3 Player
Check for Understanding	<p>Check to make sure the student understands the connection between using a device and accessing specific tasks. The device is a tool to help them participate with their peers on classroom assignments/activities. Check to see if the student can complete this statement, "With this _____ (tool), I am able to participate with my peers on these activities/tasks_____."</p>	

Step	Actions	Vocabulary
Closure	“Today we have learned how to use a tool or strategy to complete a specific task or tasks in a specific subject area class. Our next several lessons will continue to build the tools/strategies and the settings in which you can use these in your classes.”	

### Rationale:

The intent of this lesson is to come up with a plan for accessing all the typical classroom tasks. There will be different student-specific tools for this, including assistive technology, auditory strategies, and even the use of educational partners. Since classrooms/subject areas are so varied, ultimately you will want to cover each class, completing a summary of access strategies called “My Strategies for Completing Visual Tasks in School”. Along the way you will be assessing the student’s competency in using technology, and teaching the student how to use a device to access to classroom activities. Once the student has a record of the strategies and tools he uses for access, as well as the necessary skills in using the technology, he will use this record to advocate for his skills and needs with individual classroom teachers.

**Note:** This unit is not intended to cover skill instruction for specific devices, and relies on the teacher’s ability to access additional instructional materials for teaching skills related to assistive technology within the context of classroom tasks.

### Materials:

- *My Strategies for Completing Visual Tasks in School* worksheet

### Resources:

- SETT Framework (acronym for Student, Environments, Tasks, and Tools), by Joy Zabala. <http://www.joyzabala.com/>
- *ECC Essentials, Teaching the Expanded Core Curriculum to Students with Visual Impairments*, Allman C.B., and Lewis, S., AFB Press, 2014. See chapter 6, “Assistive Technology”.
- *Learning to Listen, Listening to Learn*, Barclay, L.A., Editor. AFB Press, 2012
- *Assistive Technology for Students Who Are Blind or Visually Impaired, A Guide to Assessment*. Presley, I., and D’Andrea, F.M., AFB Press, 2009.
- Auditory Strategies: <http://www.pathstoliteracy.org/auditory-strategies>
- Assistive Technology and Listening: <http://www.pathstoliteracy.org/assistive-technology-and-listening>
- Overview of Technology: <https://www.tsbvi.edu/statewide-resources/professional-development/assistive-technology>
- Learning Ally (auditory materials and equipment) <https://www.learningally.org/Educators/Resources/GetStartedNow.aspx>

**Self-Determination Lesson Plan**  
**Unit 2: Student Toolbox**  
**Lesson 10: Strategies for Increasing Access - Strategies for Print Readers**

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**Unit Goal:**

Student who are using print will develop a set of strategies (toolbox) to optimize functioning on visual tasks in a variety of settings

**Lesson objective(s):**

Student is able to efficiently use strategies and assistive technology to increase independent access to visual tasks. Strategies might include using an optical device, audible materials, assistive technology, and/or working with a partner

**Teaching procedures/steps:**

Step	Actions	Vocabulary
Anticipatory	Ask the student to describe the kinds of learning activities he needs to complete in any given class. (e.g., copy/read near and distance materials, give a speech, read from a textbook/work sheet, complete a written assignment, read charts/maps/graphs). Tell the student you will be working together to develop ways to complete these typical classroom activities using a variety of tools and strategies.	Tools Strategies
Introduction	“We are going to be looking at the tools, such as assistive technology devices you have that help you participate in classroom activities, and the strategies (ways of getting things done). We’ll see how well these are working for you, and look at ways to increase your proficiency with these tools and strategies. We’ll also try to determine if there are additional tools/strategies that might work better for you.”	
Stating the Goal	“This lesson will help you learn strategies and tools to optimize functioning on visual tasks in a variety of settings.”	

Step	Actions	Vocabulary
Instruction	<ol style="list-style-type: none"> <li>1. Begin by writing down the learning activities the student named (see Anticipatory). Add to this as needed.</li> <li>2. Ask the student to show you the equipment he uses for accessing print, as well as any AT he uses for access to auditory materials. Determine student's proficiency on each piece of equipment, including telling you the kinds of activities he is able to do with each piece.</li> <li>3. Complete the "My Strategies" worksheet</li> <li>4. Make a list of each class the student attends. Using the results of the "My Strategies" worksheet, ask which of these tools/strategies he uses for each individual class. Are there any problem areas? Are there things he is currently not able to access at all?</li> <li>5. Ask him to select a visual task (from the left column) to begin to "fine tune", given the AT equipment issued.</li> <li>6. Begin to work on strategies for using technology to access individual visual tasks. Some of these strategies will involve AT to access print, and some will involve auditory AT. Each strategy will require initial assessment (what does the student already know) and instruction (how can the student use this equipment to access this particular activity). A great resource for information access skills can be found on pp. 190-191 and pp. 197-201 in <i>ECC Essentials</i>. A resource for auditory access skills and technology can be found in chapters 4-5 in <i>Learning to Listen, Listening to Learn</i>.</li> <li>7. Create a document or other product (i.e., PowerPoint) that can be shared with others and gives access details across the curriculum.</li> <li>8. Begin to explore access outside the school, and how the same tools could be used to access recreational and career-related activities.</li> </ol>	MP3 Player Screen enlargement software Electronic tablet Optical device
Check for Understanding	Check to make sure the student understands the connection between using a device and accessing specific tasks. The device is a tool to help them participate with their peers on classroom assignments/activities. Check to see if the student can complete this statement, "With this _____ (tool), I am able to participate with my peers on these activities/tasks _____."	
Closure	"Today we have learned how to use a tool or strategy to complete a specific task or tasks in a specific subject area class. Our next several lessons will continue to build the tools/strategies and the settings in which you can use these in your classes."	

### Rationale:

The intent of this lesson is to come up with a plan for accessing all the typical classroom tasks. There will be different student-specific tools for this, including assistive technology, auditory strategies, and even the use of educational partners. Since classrooms/subject areas are so varied, ultimately you will want to cover each class, completing a summary of access strategies called "My Strategies for

Completing Visual Tasks in School”. Along the way you will be assessing the student’s competency in using technology, and teaching the student how to use a device to access to classroom activities. Once the student has a record of the strategies and tools he uses for access, as well as the necessary skills in using the technology, he will use this record to advocate for his skills and needs with individual classroom teachers.

**Note:** This unit is not intended to cover skill instruction for specific devices, and relies on the teacher’s ability to access additional instructional materials for teaching skills related to assistive technology within the context of classroom tasks.

### **Materials:**

- *My Strategies for Completing Visual Tasks in School* worksheet
- MP3 Player
- Screen enlargement software
- Electronic tablet
- Optical devices

### **Resources:**

- SETT Framework (acronym for Student, Environments, Tasks, and Tools), <https://www.readingrockets.org/topics/assistive-technology/articles/sett-framework-tool-selection>
- *ECC Essentials, Teaching the Expanded Core Curriculum to Students with Visual Impairments*, Allman C.B., and Lewis, S., AFB Press, 2014. See chapter 6, “Assistive Technology”.
- *Learning to Listen, Listening to Learn*, Barclay, L.A., Editor. AFB Press, 2012
- *Assistive Technology for Students Who Are Blind or Visually Impaired, A Guide to Assessment*. Presley, I., and D’Andrea, F.M., AFB Press, 2009. Available on [Amazon](#).
- Auditory Strategies: <http://www.pathstoliteracy.org/auditory-strategies>
- Assistive Technology and Listening: <http://www.pathstoliteracy.org/assistive-technology-and-listening>
- Learning Ally (auditory materials and equipment) <https://www.learningally.org/Educators/Resources/GetStartedNow.aspx>
- Three videos on the topic of teaching students to use optical devices:
  1. Optical Device Use, Part 1: [Instruction in the Use of Optical Devices](#)
  2. Optical Device Use, Part 2: [Visual Access In a Range of Environments](#)
  3. Optical Device Use, Part 3: [Selling Optical Device Use to the Tough Customer](#)

## Self-Determination Lesson Plan

### Unit 2: Student Toolbox

#### Lesson 11: Strategies for Increasing Access - Strategies for Using Audible Materials

##### Unit Goal:

Student will develop skills to benefit from audible materials.

##### Lesson objective(s):

Student is able to efficiently use audible information and technology as a back-up strategy for print.

##### Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	Sometimes reading assignments may be lengthy, and there may be reading assignments that are difficult to get in a print/braille format. In these instances, it's a good idea to supplement with audible materials.	Auditory Audible
Introduction	"We are going to be learning how to use the auditory equipment efficiently as a way to deal with visual fatigue and as an auditory way to access print materials. By the end of this unit you should feel comfortable with using audible materials efficiently."	
Stating the Goal	"These lessons will help you learn strategies and tools to optimize functioning with audible materials, including audio books, audible output on computers/tablets, live readers, and lectures."	Audio books
Instruction: Critical Listening Skills	<ol style="list-style-type: none"><li>1. Read aloud, starting with short sentences and moving to longer paragraph/stories. For each, as the student to recall as many details as he can.</li><li>2. Work with the student on taking simple notes as he listens.</li><li>3. Read aloud a paragraph or passage and ask the student to restate the order in which events happened. Have the student write out events as he listens, then place these events in chronological order.</li><li>4. Read a paragraph to the student and ask him to state the main idea.</li></ol>	

Step	Actions	Vocabulary
Instruction: Technology for Listening	<ol style="list-style-type: none"> <li>1. Begin by listening to recorded books for pleasure and discussing these.</li> <li>2. Use auditory games on the computer/tablet to enhance listening skills.</li> <li>3. Listen to a screen reader while using the computer.</li> <li>4. Listen to audible literature on digital players (such as an MP3 player) and retell story.</li> <li>5. Teach the student how to set up a tablet for auditory output (Voice Over or Google Voice) and practice using this on materials the student is interested in.</li> <li>6. Visit the Learning Ally website together to review how to access/use this service.</li> <li>7. Teach the student how to use the Learning Ally Audio app.</li> </ol>	MP3 Player Voiceover/Google Voice Learning Ally Learning Ally Audio App
Instruction: Using Digital Books	<ol style="list-style-type: none"> <li>1. Teach student how to access e-books via synthesized speech or read with a refreshable braille display.</li> <li>2. Teach student how to use an MP3 player, CD player, e-book reader, PDA, smart phone, or computer to access digital talking books. This skill includes navigating through the audible text: examine the book by page, section, chapter, table of contents, and an index; setting bookmarks</li> <li>3. Teach student how to take written notes of critical information as they listen and how to use these notes to study for exams.</li> </ol>	E-Books/Digital Text Digital Talking Books Audio Books
Instruction: Audio-Assisted Reading	<p>It is important that students are able to listen to gain information. Audio-assisted reading is a method for students to use recorded books along with the corresponding print/braille book. For steps in this lesson, refer to handout, <i>Audio Assisted Reading</i>, by Ike Presley. These steps can also be found in <i>Learning to Listen/Listening to Learn</i>, pp. 138-140.</p>	Audio-Assisted Reading
Check for Understanding	<p>Your final check for understanding will be a student who can function efficiently with audible materials, and can express his preferences for using audible materials to teachers.</p>	
Closure	<p>Once the student can use audible materials, develop a grid or listing of classes and make note of where or on which materials could be paired with auditory content.</p>	

### Rationale:

The intent of this lesson series is to teach the student the necessary listening skills as a tool to access learning materials. Within the context of the expanded core curriculum (ECC), this lesson covers the categories of Sensory Efficiency, Assistive Technology, Compensatory Skills, and Self-Advocacy. The student will need to have efficient listening skills and advocate for audible materials as a tool for learning. Audible materials are varied—from lectures to voice output devices—and will require targeted instruction. Listening,



within the context of learning, is not a passive activity, but rather one in which the student must have methods for listening with discrimination, make notes, and be able to retrieve information efficiently.

**Note:** Make sure your student has a current hearing assessment.

### **Materials:**

- Computer system with screen-reading software
- MP3 Player
- Learning Ally Audio App and Reading Ally Membership
- E-reader with voice output
- Bookshare Membership
- Read2Go App

### **Resources:**

- *ECC Essentials, Teaching the Expanded Core Curriculum to Students with Visual Impairments*, Allman C.B., and Lewis, S., AFB Press, 2014. See chapter 6, "Assistive Technology".
- *Learning to Listen, Listening to Learn*, Barclay, L.A., Editor. AFB Press, 2012. Chapters 4 and 5.
- *Assistive Technology for Students Who Are Blind or Visually Impaired, A Guide to Assessment*. Presley, I., and D'Andrea, F.M., AFB Press, 2009.
- Auditory Strategies: <http://www.pathstoliteracy.org/auditory-strategies>
- Assistive Technology and Listening: <http://www.pathstoliteracy.org/assistive-technology-and-listening>
- Overview of Technology: [http://www.tsbvi.edu/67-early-childhood/1074-overview-of-technology-for-visually-impaired-and-blind-students#Braille Access](http://www.tsbvi.edu/67-early-childhood/1074-overview-of-technology-for-visually-impaired-and-blind-students#Braille%20Access)
- Learning Ally (auditory materials and equipment) <https://www.learningally.org/Educators/Resources/GetStartedNow.aspx>
- Texas Talking Book Program <https://www.tsl.texas.gov/tbp/index.html> and BARD mobile App.

## Self-Determination Lesson Plan

### Unit 2: Student Toolbox

#### Lesson 12: Strategies for Communicating with Others about Access - Personal Preferences for Access to Visual Media

##### Unit Goal:

Student will develop skills to communicate preferred accommodations to compensate for vision loss.

##### Lesson objective(s):

Student is able to create and share a product that notes strategies for increasing participation in visual activities across the school curriculum.

##### Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	“Most of your teachers have never experienced having a student with a visual impairment in their class. There will be some assignments and materials that will be difficult for you to access (use) in the format presented by your teachers. It will be important for you to learn how to let your teachers know, in advance as well as in the moment, what your preferred adaptations/accommodations are.”	Self-Advocacy Access Adaptations accommodations
Introduction	“We are going to be learning how to document and communicate your preferred adaptations and accommodations for school work. Being able to communicate with teachers will also help you advocate for your visual preferences as an adult when you are at college and/or in the work force.”	
Stating the Goal	“This lesson will help you learn strategies and tools to communicate your need for adapted materials, and/or adaptations to the presentation of learning materials.”	

<p>Instruction: Collecting and Documenting Information on Vision and Access</p>	<ol style="list-style-type: none"> <li>1. Work with the student to complete the worksheet, <i>Access to Visual Media</i>, which will help the student clarify his personal preferred methods of access across a range of visual tasks.</li> <li>2. Using information from the <i>Access to Visual Media</i>, the student should begin to complete the worksheet, <i>Personal Preferences for Access</i>.</li> <li>3. Have the student look online to research some basic (non-technical) information on his etiology to complete the first part of the <i>Personal Preferences</i> worksheet. He should include any additional health concerns associated with the visual impairment (e.g., sensitivity to sunlight, activities to avoid due to retinal concerns)</li> <li>4. Continue to discuss and write information in all of the categories on the <i>Personal Preferences</i> worksheet.</li> </ol>	<p>Visual Media</p>
<p>Check for Understanding</p>	<p>At the end of this lesson the student should be able to explain his vision etiology to you and tell you how he best functions on typical classroom activities/materials. He should also be able to state strategies he uses to access classroom activities/materials, as well as the tools he uses to increase personal access.</p>	
<p>Closure</p>	<p>“Can you tell some things you learned about your vision and how you complete visual tasks in your classes as a result of this lesson? Are there some things you think we should learn more about or cover in the future related to access to visual tasks?”</p>	

**Rationale:**

This lesson is a critical component of self-advocacy and empowerment for a student with a visual impairment. The intent is to teach the student how to clarify the ways in which he accesses an array of visual tasks, and to communicate his needs to others. By the end of this lesson he should have a clear idea of both tools (such as assistive technology) and strategies (such as requesting downloadable copies of assignments in advance to be read on a tablet) so that he can help teachers understand specific accommodations to the school curriculum.

**Materials:**

- Worksheets:
  1. *Access to Visual Media*
  2. *Personal Preferences for Access*
- Model and/or diagram of the eye

**Resources:**

*ECC Essentials, Teaching the Expanded Core Curriculum to Students with Visual Impairments*, Allman C.B., and Lewis, S., AFB Press, 2014. See chapter 12, “Self-Determination”.



## Self-Determination Lesson Plan

### Unit 2: Student Toolbox

#### Lesson 13: Strategies for Communicating with Others about Access - Creating a Product to Communicate Visual Strategies/Tools with Teachers

##### Unit Goal:

Student will develop skills to communicate preferred accommodations to compensate for vision loss.

##### Lesson objective(s):

Student is able to create and share a product that notes tools and strategies for increasing participation in visual activities across the school curriculum.

##### Teaching procedures/steps:

Step	Actions	Vocabulary
Anticipatory	"We have spent some time studying your visual impairment, as well as the tools and strategies you need to participate with your peers in class. In this lesson, we will create something (product) that can help them understand how you best function on visual tasks in their class."	Difference between a "tool" (AT) and a "strategy" Product
Introduction	"We are going to be learning how to document and communicate your preferred adaptations and accommodations for school work. Being able to communicate with teachers will also help you advocate for your visual preferences as an adult when you are at college and/or in the work force."	
Stating the Goal	"This lesson will help you create a product to communicate your preferred strategies and tools that compensate for your vision loss."	

Step	Actions	Vocabulary
Instruction: Creating a Product	<ol style="list-style-type: none"> <li>1. Using the <i>Personal Preferences</i> worksheet, allow the student to select a product through which he will communicate visual preferences to teachers. Products could include one or any combination of these: PowerPoint, notebook with dividers, brochure, portfolio, one-page document, and/or short video, photograph slideshow of tools/strategies.</li> <li>2. Product should include:               <ol style="list-style-type: none"> <li>a. Student's etiology and any health concerns</li> <li>b. How eye condition affects visual performance</li> <li>c. Strategies used to complete visual tasks in school</li> <li>d. Tools (assistive technology) used</li> <li>e. Personal preferences for the presentation of school-related materials</li> </ol> </li> </ol>	PowerPoint Portfolio
Instruction: Presenting Product to Teachers	<ol style="list-style-type: none"> <li>1. Student should practice having a discussion with his TVI first, using his product as prompt.</li> <li>2. Select one general education teacher to listen to the student's presentation of the product. Gain feedback from the teacher and adjust as necessary.</li> <li>3. Select additional teachers individually, or in a group meeting, for the student to present his product</li> </ol>	
Check for Understanding	The student should be able to (a) explain his visual condition (etiology), and (b) use his product as a conversational tool with others.	
Closure	By the end of this lesson, the student should have a product that captures the key discussion points to be shared with teachers. He should first practice his presentation with the TVI, then with at least one general education teacher.	

**Rationale:**

The intent of this lesson series is to teach the student how to clarify how he accesses an array of visual tasks, and to communicate his needs to others.

**Materials:**

- Pull information from worksheets completed in the previous lesson: *Access to Visual Media; Personal Preferences for Access*
- Product should include document “Technology I Find Useful” highlighting the technology specific to the student. Add to this list if necessary.

**Resources:**

- *ECC Essentials, Teaching the Expanded Core Curriculum to Students with Visual Impairments*, Allman C.B., and Lewis, S., AFB Press, 2014. See chapter 12, “Self-Advocacy”.







# Materials for Unit 2

Use with Lessons 6 & 7:

## Access to Visual Media

Student Name: \_\_\_\_\_

Directions: Indicate which method of access you use most often for each of media.

### CODE:

**RP** I use regular print (no optical devices)

**LP** I use large print

**B/T** I use braille/tactile materials

**OD** I use an optical device (telescope, magnifier, cell phone, tablet)

**WH** I can do this if someone helps me

**X** I can't do this yet

Use with Lessons 6 & 7:

<b>Media</b>	<b>RP</b>	<b>LP</b>	<b>B/T</b>	<b>OD</b>	<b>WH</b>	<b>X</b>
textbooks						
diagrams and charts in science / social studies books						
small visual screens (cell phone, microwave key pad)						
store receipts						
food boxes and cans						
my handwritten notes						
board games						
menus						
library books						
maps						

Use with Lessons 6 & 7:

<b>Media</b>	<b>RP</b>	<b>LP</b>	<b>B/T</b>	<b>OD</b>	<b>WH</b>	<b>X</b>
Interactive board or classroom board						
projector screen						
computer monitor						
information on classroom walls						
sporting events & performances						
school assemblies						





## My Visual Strategies for School

Visual Task	Magnifier or Telescope	Braille	iOS Device	Desk-top Video Magnifier	Screen Magnifier	Screen Reader	Desk Copy	Audible Materials	Partner with Student	None Needed
Read print in textbooks										
Read small print such as math symbols, tables, charts, graphs										
Read information on the chalkboard or whiteboard										
Read information on an interactive board (e.g., Smartboard)										
Read things projected on a screen (such as a PowerPoint)										
Watch a speaker in class, at an assembly, or large lecture hall										



Visual Task	Magnifier or Telescope	Braille	iOS Device	Desk-top Video Magnifier	Screen Magnifier	Screen Reader	Desk Copy	Audible Materials	Partner with Student	None Needed
Use audio books along with print books for classwork										
Complete art projects										

# **PERSONAL PREFERENCES FOR ACCESS**

## NOTE PAGES FOR ADDING TO YOUR PRESENTATION

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Information on My Etiology

### Access to Distance Tasks in School Settings

Examples of tasks:

Strategies and tools I use to accomplish these:

My challenges:

Access to NEAR AND MEDIAL Tasks in SCHOOL Settings

Examples of tasks:

Strategies and tools I use to accomplish these:

My challenges:

## Access to DISTANCE TASKS in COMMUNITY Settings

Examples of tasks:

Strategies and tools I use to accomplish these:

My challenges:

## Access to NEAR AND MEDIAL Tasks in COMMUNITY Settings

Examples of tasks:

Strategies and tools I use to accomplish these:

My challenges:

Access to NEAR AND MEDIAL Tasks at HOME

Examples of tasks:

Strategies and tools I use to accomplish these:

My challenges:

Use with Lesson 12

# Devices, Tools, and Technology I Use

## Technology I Find Useful

**Monocular or telescope**-I use this for reading and copying from the board, watching assemblies, looking at things that are more than 8 feet away from me (e.g., a ball game, signs across the road, overhead menus). Sometimes I use it to see things in a middle range (3-5 ft.) such as items on a store's top shelf.

**Magnifier**-for reading smaller print on school handouts, in textbooks, on food packages, etc.

**Reading glasses** are for reading longer sections of text where my hands are free to hold the material. These may be called microscope glasses or high ADD glasses.

**Corrective Lenses (glasses)** may be prescribed for some students to correct additional refractive errors such as myopia, hyperopia, and/or astigmatism. Some lenses are transitional, or change tint to reduce light. Not all students benefit from corrective lenses.

**Sunglasses** protect the eyes from excessive light and harmful UV rays. Some students wear these indoors, but most will likely wear them outside.

**Audio App for smart phone or computer**-This app allows me to listen to audible textbooks that I get from agencies such as Learning Ally or Bookshare.

**ZoomText**-screen enlarging software installed on a computer to increase the image size of what's shown on the screen.

**JAWS**-screen reading software installed on a computer to help access documents or websites (this program will read aloud what is shown on the screen).

**TI Graphing Calculator View Screen** -This enlarges the readout on my graphing calculator.

**Tablet (e.g. iPad)**-This lets me download assignments so I can change print size, take a snapshot of something at a distance and then enlarge it, take notes in class, complete written assignments, and send these back to teachers, and/or load auditory books.

**Portable video magnifier**-This has a built-in camera and lets me adjust both font and contrast in print material. It's good for spot viewing but not for lengthy assignments. Some models can freeze an image and let me store it such as a business card or information on a food package.

**Portable video magnifier and distance viewer**- This has a screen, a camera, and a materials tray. The camera swivels so I can view the board, or I can use it with books and other print materials. Some models can hook up to a laptop.

**Braille notetaker** – This is a portable device with a braille keyboard for entering information. It has a speech synthesizer or braille display for output. I can enter information on the braille keyboard and have the option of transferring it to a larger computer with more memory, reviewing it using the built in speech synthesizer or braille display, or printing it on a braille or inkprint printer.

**Perkins brailier** – This is like a braille typewriter.

**Cranmer abacus**- This is a calculation tool I use in math classes.



## **Tools for Accessing Different Environments and Increasing Self-Sufficiency**

Students with a visual impairment may use a variety of tools (assistive technology), depending on the setting and situation. Ease of use, cost, convenience, portability, the setting, and the visual demands will dictate which tool(s) might work the best. Standard assistive technology tools for students who are blind or have low vision include optical devices (e.g., magnifiers, telescopes), talking calculators, electronic braille devices, video magnifiers, braille notetakers, canes, computers with JAWS or screen enlargement software, and iOS devices. Tools may be optimized by lighting where needed by the student. Ultimately, independent access to their environments will contribute to a student's self-confidence, self-advocacy, and self-determination. The following lesson ideas will require instruction with the TVI, COMS, and parents.

### **Ideas for Using Tools in the Home**

#### **Snack and Meal Preparation**

Use a magnifier to follow recipes to prepare a snack or simple meal. Recipes can be found on packages (e.g., taco seasoning, pudding, rice), in cook books, or printed from a web site.

Use a magnifier to look at food labels, particularly salt, sugar, and fat content. Discuss the affect these have on health, and what constitutes a healthy diet.

Use a magnifier to read numbers on keypads and dials for the oven, stove, and microwave when cooking.

Use a magnifier to read food expiration dates on items stored in the pantry and refrigerator. Combine this with the "sniff" test and discuss discarding food that is turning bad.

Use voiceover on an iOS device to follow/prepare a simple recipe.

#### **Health and Appearance**

Use a magnifier to read medicine packaging, including dosage instructions, expiration dates, and refills for prescription medications. Discuss steps to take if you feel you have taken too much of any medication (poison hotline).

Use magnifier to read a thermometer, or a talking thermometer. Discuss what constitutes a fever, and how this information is used.

Use a magnifying mirror to check skin, teeth, and hair, or to look closely at eyes for applying eye makeup.

#### **Recreation and Entertainment**

Use a magnifier to read instructions for games, as well as print on game cards and boards.

Use print enlargement software to read information on a computer monitor (email, internet searches, Facebook, articles).

Use a telescope to watch TV and/or follow action while playing with a Wii.

Use a magnifier to read parts of a favorite magazine/newspaper. Discuss a selected topic.

Use a magnifier for hobbies such as scrapbooking, coin/card/stamp/rock collecting.

Use a telescope to follow the action of pets in the neighborhood, and/or birds and squirrels in the yard.

Use a magnifier to read a book to a younger sibling.

Ideas for Using Tools in the Community

Use a telescope to locate stores and read signs in the mall.

Use both a telescope and magnifier to complete a scavenger hunt in a grocery store, using a list of things to find along with their prices.

Use a telescope to order from overhead menus in fast food restaurants.

Use a magnifier to order from table menus.

Visit a zoo, rodeo, or stock show to watch the action and observe animals.

Plan a trip in the community, using public transportation. Use a magnifier to read bus routes, and a telescope to watch for bus numbers.

Use a telescope at a sporting event. Keep track of the score on the scoreboard, relate action as it occurs, and locate people in the crowd.

Attend a museum, using the telescope to stand back and view the art work.

Ideas for Using Tools in the School

### For Middle School and High School Students

Start with a conversation with the student about each class, and the kinds of visual tasks the student is required to complete. Create a chart, writing in how the student currently accesses school assignments. A completed chart might look like this:

SUBJECT	TEXTBOOKS	HANDOUTS	OVERHEAD	BOARD	INTERNET
English	Large Print	Reg./Lg. Print	Print copy	Print copy	Zoomtext
Math	Reg. Print	Large Print	“can see fine”	Walk to Board	n/a
Science	Reg. Print	Large Print	Can’t see	“can see fine”	Pretty hard to read units

Use this information as a starting point for increasing independence in the student.

#### Lessons to consider:

Read smaller print size of an assignment currently completed with large print, using a magnifier to enlarge the print instead. This takes practice!

Use a magnifier to read information on maps, charts, and graphs, particularly in the student’s math, science, and social studies/history books, including information printed from the internet.

Access the board/overhead using a telescope. Practice reading and copying from the board, increasing the number of words copied per view. The goal is to read/remember/write down as many as 10 words at a time, checking for accuracy.

Access the board/overhead using a video magnifier. Practice locating information, focusing, and taking notes.

Access the board/overhead using a tablet. Practice locating, saving, and storing information. Use a magnifier to read notations on measurement devices (linear, as well as volume).

**For Pre-Primer through Elementary Students**

For 3-5 year olds, explore the properties of magnifiers by looking at bugs, leaves, shells, and other 3-dimensional objects.

For 4-5 year olds, explore the properties of a telescope outside, locating play equipment, friends, moving vehicles, etc. Inside, use the telescope to watch as the teacher conducts a story time or demonstrates a lesson.

For 1<sup>st</sup>-6<sup>th</sup> graders, teach students how to use a telescope to view and copy information placed at a distance.

For 1<sup>st</sup>-6<sup>th</sup> graders, teach students how to use a magnifier to increase reading fluency on smaller print sizes.

Practice telescope skills on field trips.

For students who require larger print on computer monitors, provide instruction with enlargement software (e.g., Zoomtext).

Teach accessibility options for computers, cell phones, and tablets.

Use a monocular in games (e.g., Battleship game graphic posted to a wall; mazes placed on a wall)

Use magnifier to read game cards and game instructions.

## Visual Tasks Survey

Think about the following tasks that require use of vision. Is the item very easy or very hard to complete, or somewhere in between? Please circle the number that best describes your ability to comfortably complete each task. If you use assistive technology (e.g., braille device, telescope, magnifier) to complete the task, please check “AT” next to the task.

### Scoring

1 = very hard

2 = somewhat hard

3 = neither hard nor easy

4 = somewhat easy

5 = very easy

When you are finished, total your score.

- Between 88-110 = You are good to go!
- Between 66-88 = Perhaps you could develop some more strategies to complete these tasks more easily.
- Between 22-66 = Work with your TVI to develop strategies that would enable you to access more visual tasks.

Total Score Visual Tasks in School	
Total Score Visual Tasks in the Community	
Total Score Visual Tasks at Home & Neighborhood	
<b>TOTAL SCORE COMBINED</b>	

**Visual Tasks in School**

## 1. Read print in books or magazines

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

## 2. Read very small print such as math symbols, tables, charts, graphs)

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

## 3. Read information on the board or on signs at school

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

## 4. Read my own handwritten notes

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

## 5. Read things projected on a screen (such as a PowerPoint)

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

## 6. Read a computer monitor

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

7. Watch a speaker in class, at an assembly, or in a large lecture hall

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

8. Using audio books along with print books for classwork

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

### Visual Tasks in the Community

9. Read price tags or label information on items in a store

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

10. Look at scenery or watch wildlife

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

11. See small video displays such as on a cell phone, MP3 player, thermometer, and credit card scanner in grocery store

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

12. See activity in the distance such as a football game or concert

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

13. Find information on outdoor signs or buildings

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

14. Read paper menus in restaurants

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

15. Read overhead menus at fast food restaurants

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

**Visual Tasks at Home & Neighborhood**

16. Read cooking directions on food packages or recipes

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

17. Read numbers/letters on oven or microwave

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

18. Read numbers on measuring spoons/cups

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

19. Read directions for appliances

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

20. Read expiration dates on food packaging

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

21. Read dosage instructions on medicine bottles

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	

22. Walk independently to a neighborhood house and/or store

very hard	somewhat hard	neither hard nor easy	somewhat easy	very easy	AT? check
1	2	3	4	5	





# Texas School for the Blind & Visually Impaired Outreach Programs



**Figure 1 TSBVI logo.**



"This project is supported by the U.S. Department of Education, Office of Special Education Programs (OSEP). Opinions expressed herein are those of the authors and do not necessarily represent the position of the U.S. Department of Education."

**Figure 2 IDEAs that Work logo and OSEP disclaimer.**