Envision I

Vision Enhancement Program Using Distance Devices

Students 10 and Younger

INSTRUCTION MANUAL

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Introduction

Produced by the American Printing House for the Blind, the ENVISION Program is an exciting array of materials that will have a significant impact on encouraging the provision of interdisciplinary low vision care for visually impaired children.

ENVISION is the first training program to address the complicated relationships between the assessment of vision in the classroom and the clinical examination. Students are best served in a low vision program that includes the input of teachers, parents, primary care eye doctors, and the clinical low vision specialist. As might be expected, obtaining coordinated input from all these individuals/professionals is often a difficult task. This effort is made difficult because of the lack of an accepted standard of care for students with low vision. The success of any vision care program is directly related to the quality of the professionals providing the services, and the **low vision service** is no different. Having a model or an accepted standard of care will make developing this positive working relationship easier. Everyone involved will have a better idea of what is expected professionally. The ENVISION Program can be a small but very significant part of this "envisioning" of a national model of low vision care for visually impaired children and young adults.

Low vision must be seen as a continuum of assessments from home to school to clinic. A functional assessment in the classroom, a mobility assessment in the hallways of the new school, a report from parents about visual functioning at home, or a clinical examination in the doctor's office are all important features of a low vision service. However, each represents only a piece of the program. Such information will be much more effective in helping the child if coordinated into one plan of vision care. This team of people can be thought of as the "low vision specialist," not the individual experts who provide the independent assessments.

The goal of the team is not to provide the student with devices that might aid in the performance of tasks such as reading small print, viewing movies, seeing writing on the chalkboard (dry erase board), or getting around the school. Rather, the "team" concentrates on how effectively the student is using his vision. Individual providers often use the accomplishment of a specific task as the hallmark of a successful educational intervention for a visually impaired student and a milestone in the student's road to optimum visual performance. The team must measure and measure again the student's capabilities and then provide the resources (devices, prescriptions, training, materials, etc.) that will allow that student to achieve clinically-measured potentials in vision.

While clinical assessments are very important in determining the child's potential to perform tasks visually, all those involved in the child's care must remember that all clinically-measured visual potentials cannot be achieved in the non-clinical environment. Often, visually impaired children will achieve beyond those clinically measured visual potentials. Thus continuous dialogue among team members and ongoing assessments are key to the successful **low vision service.**

The service actually begins in the pediatrician's or optometrist/ophthalmologist's office when the child is an infant, when the eye problem is first noticed. A referral to a pediatric ophthalmologist should result in appropriate medical care, which will help assure that future loss of vision is prevented.

If the child's vision meets the criteria, the pediatric ophthalmologist must refer the child for special services for the visually impaired in the local school system. In addition, the parents should be advised to contact a low vision clinician in the community or request this clinical assessment through the local school system. Parents and teachers should be made aware that there are two very different types of clinical examinations and that the child will need to be followed medically by an ophthalmologist and also by the low vision team, who track changes and needs in his vision. In this manner, the ophthalmologist

becomes a very important part of the **low vision service** and an ongoing, active member of the team.

The teacher for the visually impaired (TVI) will have many responsibilities to the child in developing appropriate and efficient educational programming. Participating in the **low vision service team** means the TVI will often be the person who initiates and/or advocates for the clinical low vision assessment.

The TVI will prepare a low vision functional assessment for the low vision clinician once the clinical evaluation has been arranged. This low vision functional assessment will be a compilation of the functional assessments already provided by the school (educational, mobility, social, psychological), as well as the TVI's own observations. The purpose of the low vision functional assessment is to inform the low vision optometrist of the types of problems the student is having in the classroom and with other aspects of the educational program. The capabilities of the child to function visually and a list of tasks and activities with which the student is having difficulty must be included in the low vision functional assessment. The clinician will learn more about acuity from the listing of tasks the student can and cannot do, than from the information provided by a visual acuity chart. The teacher's observation of the child's visual performance is indispensable to the clinical evaluation. The TVI reports information on visual

functioning that cannot be measured in the clinical setting, *again emphasizing the importance of the team approach.*

The low vision clinician is the next member of the team to interact on behalf of the child. The clinical evaluation is designed to provide insight into the child's visual capabilities as he works under ideal conditions. The clinical data will describe what components of the child's present environment (as described in the TVI's low vision functional assessment) will enhance the visual potential and identify which components will most adversely affect visual performance. Based on the clinical data, the low vision clinician makes *prescriptive recommendations* as to optical interventions that may allow the student to perform, or enhance efficiency in various school tasks and activities.

The term "prescriptive recommendation" is an outgrowth of the team approach. If the device or glasses are "prescribed," there exists the assumption that a final decision has been made. This makes it difficult to evaluate the use of the device for the specified educational goals. "How do we tell the clinician this device doesn't work?" can be a stressful issue among team members. Fortunately, "prescriptive recommendation" implies that the device be evaluated in the classroom under real life conditions, stresses, and distractions. Since it is only a recommendation, the potential for a relaxed discussion about its success or failure in the classroom is enhanced. The team effort

will be much more effective if the device is recommended and "becomes" a prescription based on the clinical data and the functional information provided by the TVI. This evaluation of the prescriptive recommendation will include classroom training, instruction, and task experiences.

The low vision clinician must prepare a clinical low vision report for the TVI that outlines the clinical data obtained. The report will also suggest how much training with the device will be needed before attempting to use it for specific tasks in the classroom. The training can be:

- Generic in nature with the goal of developing visual skills with magnification.
- Specific task-oriented training with the prescriptive recommendation.

With this additional training and experience in the classroom comes the opportunity for the prescriptive recommendation to be modified or even changed at some future clinical assessment.

The ENVISION Program will make its greatest contribution to the low vision service at this point. The clinician does not know enough about the classroom and educational priorities to make effective training recommendations for the teachers to follow up. The TVI is not experienced enough with optics to

be able to successfully integrate the prescriptive recommendation/device into the daily classroom experience for the child.

With the ENVISION training manual, the TVI (or orientation and mobility instructor, physical therapist, occupational therapist, or children's rehab counselor) will now have a more structured program to help initiate classroom-oriented optical aid training. The low vision clinician will have specific training protocols to recommend for the TVI to pursue at school. The ENVISION training program allows for better communication (teamwork) between teacher and clinician.

The training can be focused on teaching the child to better utilize his present vision by using some of the basic optical devices provided in the training program's optical array. Further, the ENVISION Program can be used to introduce the student to the care and handling of optical devices while waiting for his prescription. Students will sometimes need to be given experience with one of the basic optical devices provided in the ENVISION Training Program so that a prescriptive device may be recommended at a later date.

All of these post-examination instructional goals can be reached in a collaborative manner using the ENVISION Training Program Using Distance and Near Magnification Optical Devices.

- All levels of acuity can be involved in the training programs by the manipulation of the training devices and the print or object sizes.
- The ENVISION Program is designed to provide training materials that will provide experience with an actual optical system but not provide the student with a permanent optical device.
- As the need for greater magnification is realized for a particular individual, the size of the materials is modified rather than a stronger optical system being prescribed.
- For training purposes, the same magnified retinal image will be utilized with either approach.
- This material modification approach discourages the dispensing of optical systems out of the ENVISION Training Program and encourages the **low vision service, team approach** to vision care for the visually impaired student.
- The ENVISION Program also provides training materials and ideas for devices prescribed by the low vision clinician after the initial classroom training / assessment activities. These training activities, designed for use mainly after the dispensing of a specific device in the clinic, are usually directed at developing better **visual efficiency** with the optical system.

- This post-dispensing training gives the TVI and low vision clinician an opportunity to discover and solve additional problems that may require modifications to the prescribed device. Further, such training may identify tasks that cannot be addressed with the new prescription, and which will require further evaluation of both task and prescription in the classroom and clinic.

As noted above, it is important for the **Low Vision Service Team** to communicate easily with one another. This communication is made easier when all individuals remain focused on the student being served, not on their individual contributions and decisions. It should be obvious that in the most successful low vision service, the captain of the team is the **child being served.**

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Preparation for Using ENVISION I

Access to information about the physical environment is just as important to a person with visual impairments as it is to a person with normal sight. Many strategies exist today for providing access to the environment for persons with visual impairments. Most professionals agree that the student is best served when a multi-disciplinary approach using the expertise from the ophthalmologists, optometrists, education professionals, and parents is used. This cooperation provides the student with a better chance of receiving the appropriate optical devices and the right training for each.

Telescopes, particularly monocular telescopes, are the best recognized tools used by persons with low vision who strive to function expertly and confidently in an environment where distance vision is important. Monocular telescopes are available in a range of sizes and powers. Most are designed to help the individual better view objects that are too far away to be seen clearly. Because monocular telescopes are available in specific powers and fields of view, expert advice is needed to determine the correct monocular telescope for each student. The low vision clinician fills this need by administering a low vision exam to each student for whom it is appropriate, and by recommending telescopes.

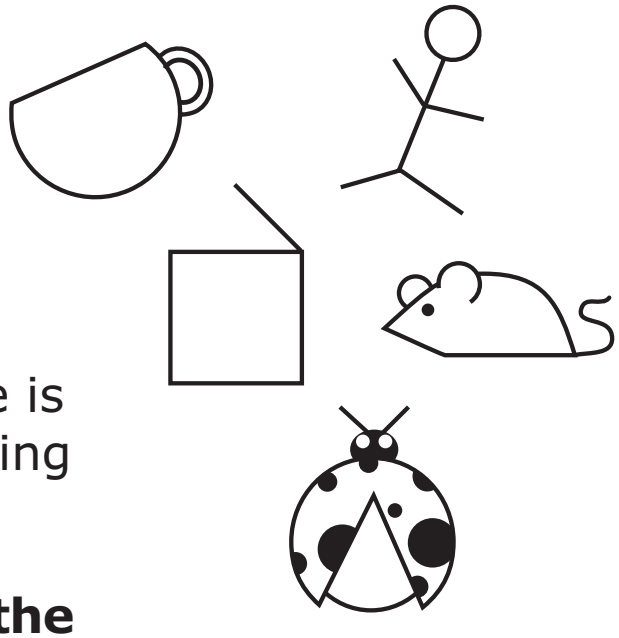
Under the best of circumstances, the low vision exam takes place after the teacher of the visually impaired has provided the clinician with useful information in the form of a functional vision assessment. The clinician makes good use of information such as "How close must Jimmy sit to the chalkboard?" and "How far from his face does Jimmy hold his books?" The following are good examples of functional vision assessments: *ISAVE* (for children 5 and younger or children with other handicapping conditions) by Beth Langley, *Functional Vision and Media Assessment for Students who are Pre-Academic or Academic and Visually Impaired in Grades K-12* by LaRhea Sanford and Rebecca Burnett, and *Functional Vision Assessment and Interventions from Essentials of Early Itervention for Children with Multiple and Visual Disabilities* by Irene Topor, Deborah Chen, Editor. Any of these, when used with wisdom, will provide good information to the low vision clinician. Basing her decision on the functional vision evaluation and the clinical exam, the clinician then prescribes one or more monocular telescopes for the student according to need, or she may determine no devices are needed.

Whatever the outcome, it cannot be overemphasized that an examination by the low vision clinician is necessary BEFORE implementation of ENVISION curricula and associated materials. Once the teacher has the low vision clinician's recommendation, it will be easy to match the student with the correct monocular telescope from the array. The array is provided for use during training if the student did not receive his telescope immediately after his examination. The teacher must use the telescope of the same power as the one recommended by the clinician unless the clinician specifies otherwise. (Sometimes the clinician will recommend some preliminary training on the 2.8x telescope prior to training with an 8x or higher power telescope.) In addition, the teacher should loan the telescope to the student only for the duration of the training session.

After the lesson, the device should be returned to the case for use during other training sessions and by other students.

Because acquiring a monocular telescope is only the beginning of access to the distant environment by the student with visual impairments, each ENVISION I: Vision Enhancement Program Using Distance Devices is designed to help the vision teacher or other practitioner fill the training need. It is intended to be used immediately after the student receives a prescriptive recommendation for a distance device, or

immediately upon the receipt of the device. This valuable time can be used to help the student become proficient in developing skills necessary for the use of his monocular telescope while he is still enthusiastic about receiving the device.



Once the student receives the recommended monocular telescope from his clinician, that device should be used for training, and the student should not be permitted to use the other devices from the array unless directed to do so by the clinician. It is very important that the student be trained in the efficient use of the prescribed devices in order to achieve the best outcome and to assure his continued use of the devices.

Unfortunately, some children will probably not receive a low vision evaluation from a clinic or qualified optometrist by the time they are referred for training. In those instances, the teacher of the visually impaired can best serve the student by insisting upon a low vision exam. If the school district refuses or if funding is a barrier, an evaluation can often be arranged using resources outside the school. The Lions Club has provided low vision exams and paid for needed spectacles, telescopes, and magnifiers for many students across America. In some cities, the Rotary

Club is helpful. In other towns and villages, the Moose Lodge or the Optimists Club can help. In almost every community, the resources exist to provide a low vision exam for a needy student.

If success doesn't occur right away, the teacher should continue to work toward obtaining an evaluation from a qualified low vision clinician. Often the teacher of the visually impaired offers the best observation and recorded visual behaviors that the clinician can obtain. If the teacher of the visually impaired establishes a good working relationship with the low vision clinician, obtaining a low vision exam for a needy student becomes a little easier because a dialogue with the clinician has already been opened. Remember, ophthalmologists and optometrists are committed to helping all people who need their services. Most of these fine professionals are willing to "work something out" if financing is an issue. Clinicians can often point out resources in the community, and the teacher can often facilitate the arrangement.

Before introducing a monocular to a student, it is important the teacher understand the child and the way his vision functions.

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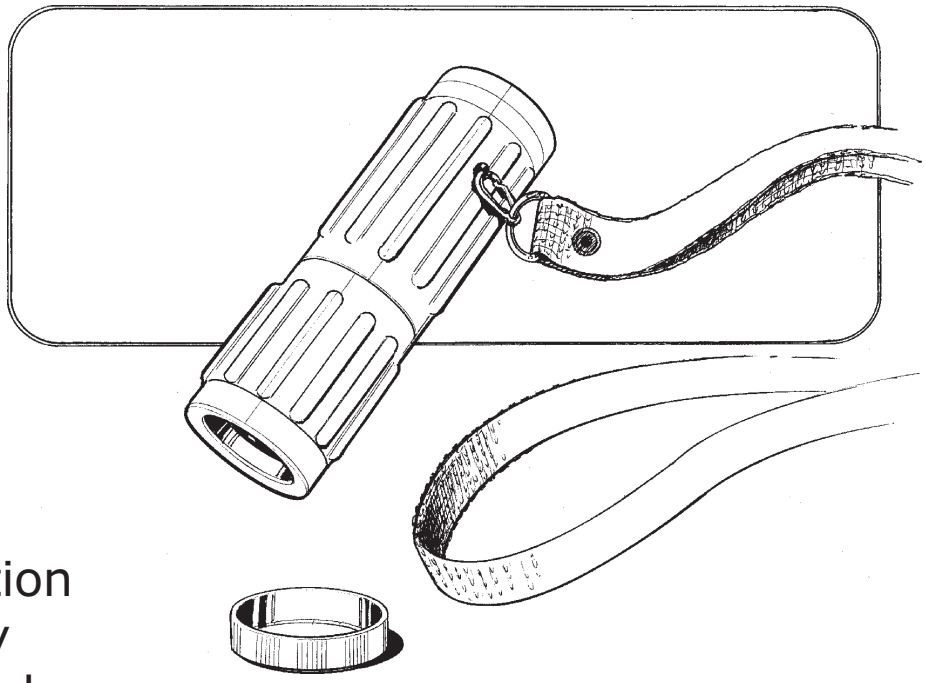


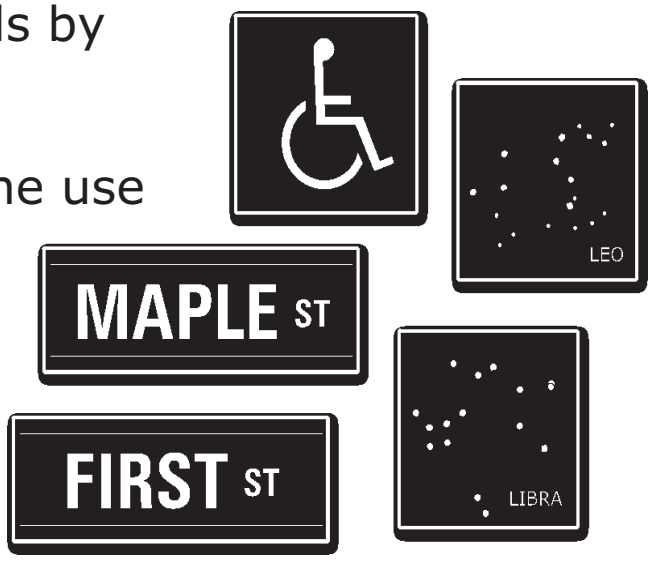
way his vision functions. The creators of ENVISION I: Vision Enhancement Program Using Distance Devices have included a "Student Information Sheet," which may be photocopied and completed with help from the student's parent or the student himself. If used wisely, it will help the teacher ask the student and parents the best questions for obtaining a basic understanding of how the student uses his vision.

The best sources of more detailed information are the teacher's functional vision assessment and the eye report issued by the student's clinician. It is wise to request a copy of the eye report from the student's parent, or have the parent sign a release allowing the teacher to receive a copy directly from the low vision professional.

Though no single model for teaching the use of telescopes can work equally well with every child, each ENVISION I: Vision Enhancement Program is a structured, skill-development and training program based upon the widely-accepted theory that such a

program should include instructor-directed tasks and reinforcement procedures that are built upon well-developed visual attending behaviors. Students without well-developed attending behaviors may need some remediation before the introduction of telescopes. Additionally, skills learned through the use of distance devices should reinforce visual attending, visual examining, and visually-guided motor behaviors (Hall and Bailey, 1989). Therefore, these curricula include high-interest activities and stories that help develop the aforementioned skills. The curricula also suggest methods for reinforcement of skills as they develop.

It is essential that the exercises used in training the student be relevant to the student's life and experience. When such activities are applied, skills are more likely to be exercised even after training is concluded (Corn, 1980). Every effort has been made to provide basic skills training and to develop enrichment exercises that are not only relevant, but also fun and interesting for the student. These exercises have taken into account psychosocial factors related to the use of optical aids by young people.



Before attempting training in the use of the monocular telescope for outdoor activities, the instructor should introduce it indoors in a controlled environment. It is most

helpful to the student if the purpose of the monocular is explained to him during the introduction.

During this preliminary training, you may discover that your student actually has no concept of "in focus." In that instance it is suggested you place a simple black and white line drawing on an overhead projector and focus the image on a light-colored wall or screen. Use the knob to bring the image into clear focus. Then turn the knob to take the image out of focus. Let the student then turn the knob to make the image look as clear and sharp as possible. In this way your student will learn the concept of "in focus."

Once the concept is learned, it is time to introduce the idea of focusing the monocular. As a general rule, the teacher originally focuses the monocular for a beginning student while looking at a target. When the student then looks at the target through the monocular, he may need to turn the focusing adjustment ring slightly clockwise or counterclockwise to bring the image into clear focus for his eye. However, one should expect more movement of the focusing ring when the distance from the target changes. For close objects, the focusing ring is turned clockwise so the monocular is lengthened; for more distant objects, the focusing ring is turned counterclockwise to shorten the monocular.

Telescopes consist of multiple lenses that work together to provide angular magnification. For example, a simple Galilean telescope might consist of an objective lens that is +20.00 D in power and an ocular lens that is -40.00 in power. The resultant magnification of this combination of lenses, separated by an appropriate tube length, would be 2x, (40 divided by 20). So the first number on a telescope indicates the magnifying power. The greater the number, the larger the image appears when viewed through the monocular telescope. As the magnification increases, the area that can be seen at one time becomes proportionately smaller. When the image is too large to fit into the limited field of the telescope, the observer must then do more scanning in order to view the entire object.

The second number indicates the diameter of the objective, or front lens of the telescope. It is measured in millimeters and "indicates how much light enters the telescope and how bright the image will be. The larger the number, the brighter the image and the greater the likelihood that the student will be able to use the system in less-illuminated environments. It does suggest (but not always) that the field of view will be larger" (R. T. Jose, personal communication, March 2002). So a monocular may have a high power, thus limiting the field, but also have a larger diameter, increasing the field of view and image brightness. When an object is farther

away, more of it can be seen. Conversely, when the object is closer, less of it can be seen. If the student needs to wear glasses while using the monocular, his field may be decreased because the monocular is held away from the eye by his spectacles, increasing the vertex distance.

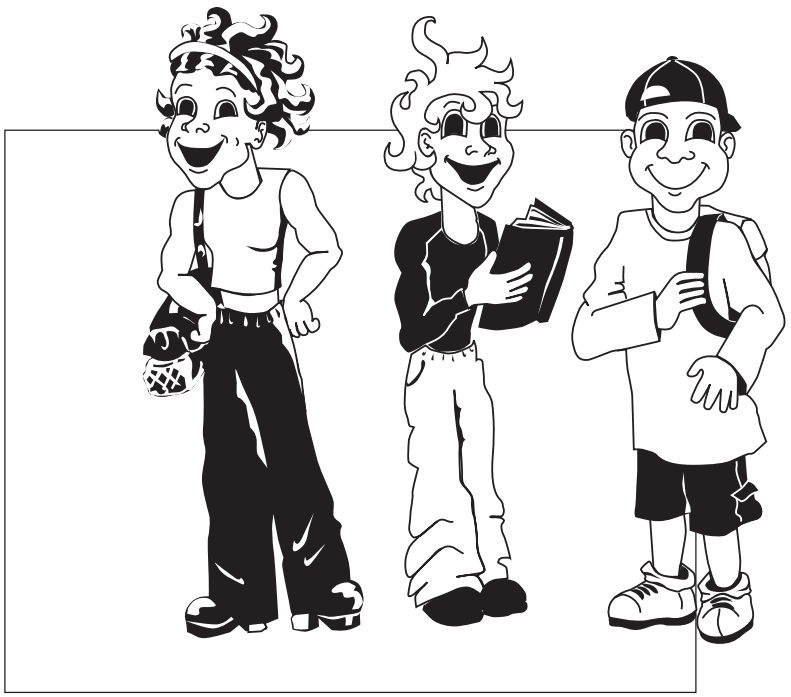
When the student has become proficient in the use of the telescope indoors, he may begin working outside. Training should take place on campus, in the student's yard, or in other familiar territory. If the teacher is not a certified orientation and mobility specialist (COMS), she should arrange for one to accompany the student on lessons whenever training extends beyond these protected areas.

Telescopes consist of multiple lenses that work together to provide angular magnification.

Frequently, fatigue will be a factor when the monocular telescope is used by the student. It is tiring for the arms to hold a monocular up to one's eye for several minutes. It may be helpful for the student to rest his elbow on a surface such as a table or desk if the viewing task is very lengthy. If such a surface is not available, it is also possible to create a support by asking the student to fold his non-dominant arm across his chest so he can rest the elbow of his dominant arm on the fist of the other

hand. However, when fatigue occurs, the teacher should be sensitive to the student's needs and allow his entire visual system to relax and feel restored before continuing the exercises.

One further concern is holding the monocular steady in order to keep the target consistently in view. This is particularly important with the stronger monoculars, since a very small hand movement is exaggerated by the telescope, making the image appear to jump around. Using both hands to hold the monocular, finding a way to support the elbow of the dominant hand, and bracing the fingers of the dominant hand firmly against the forehead are all useful techniques for accomplishing this goal.



Other issues, especially among teens, include psychosocial factors involved with using any device that might cause the student to feel different from his peers. Even the most well-adjusted, confident student will probably suffer some teasing. Some students will become reluctant to use the monocular telescope after being teased. In such cases, the

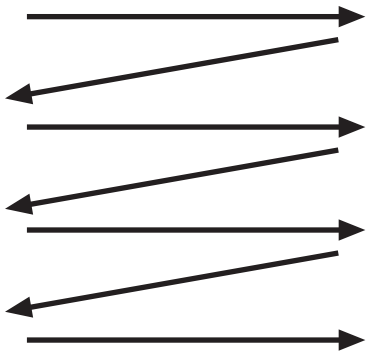
instructor should allow her student to voice his concerns. Support from the teacher and other professionals within the school system can be invaluable to a student who is self-conscious about using his monocular. Including the student's classmates in activities that make instruction and activities in optics look attractive can also help other students warm to a student who uses a monocular. Such activities might include astronomy, photography, nautical guidance, bird watching, and spectator sports.

When the student completes training and either becomes proficient in the use of his monocular telescope or shows significant problems during use, it is time for the teacher of the visually impaired to fill out the form "Using Prescriptively Recommended Optical Devices: Skill Performance Checklist for Monocular Telescopes," and send it to the low vision clinician.

Finally, the teacher should enjoy her partnership with the student during the training experience. Watching a student move gracefully and safely through his environment because he has adequate access to needed visual information is one of the most rewarding experiences a teacher can have.

Common Terms & Definitions

1. **Low Vision:** Denotes a measure of functional vision below 20/40 that cannot be fully rectified by ordinary corrective measures such as eyeglasses, contacts, or surgery.
2. **Telescope:** An optical device that uses a combination of lenses and prisms to enlarge distant objects using angular magnification. The same principle is used with ordinary sports binoculars.
3. **Focal Distance:** The distance between the magnifier's lens and the object being viewed, at the point where the object being viewed is in focus.
4. **Localization:** A term often affiliated with the training of distance devices, it denotes the ability to use an optical device to locate the position of a specific object.
5. **Scanning:** Represents the technique of following from left to right a line of print; also used to describe the process of familiarizing oneself with the layout of a page. Often scanning will follow a bit of a zigzag pattern, as shown:



6. **Tracing:** A term used to denote the following of stationary lines in the environment. Though tracing is a term used primarily for training with distance devices, it is an appropriate term for near distance devices when the task calls for following lines that do not conform to the orderliness of straight, horizontal lines prevalent in text.
7. **Visual Field (Field of Vision):** Measured in degrees from the fixation point, this is what the viewer sees peripherally and centrally when looking straight ahead.
8. **Field of View:** The area that is seen through an optical device.
9. **Dominant Eye:** The eye that naturally sends the most visual information to the brain. Often, but not always, the dominant eye will be located on the same side of the body as the dominant hand. To find your student's dominant eye, cut a hole about the size of a quarter in a piece of paper or an index card. Have your student look through the hole at a close target. Then have the student close one eye and then the other. The eye that sees the target and not the index card when the other eye is closed is your student's dominant eye. In most cases, your student will use his dominant eye when relying on distance or near devices. It is best to check with the low vision clinician to confirm which eye should be used with a prescriptive device.

10. **Dominant Arm:** The arm with which one naturally performs most physical tasks. Unless your student's dominant arm is nonfunctional, he should find it easiest to use the hand of his dominant arm to manipulate the magnifier.
11. **Scotoma:** A "blind spot" in the visual field, frequently caused by damage to part of the retina.
12. **Eccentric Viewing:** A technique used whereby part of the retina that is not usually used for sharp vision is utilized when a section of or all of the macula (the part of the retina that provides the greatest visual clarity) has become non-operative.

What To Expect From A Monocular Telescope

The following chart shows how a monocular telescope can significantly improve the viewing of distant images for the student with a vision impairment.

The left column lists common visual acuities among students with low vision. The second column lists the distance at which the student must stand to read the 20/40 line on the eye chart. The third column lists the distance at which the student must stand to read the 20/20 line on the eye chart. The fourth column lists the distance at which the student must stand to read the 20/40 line on the eye chart with a 2.8x telescope.

Entering Acuity	20/40 Distance	20/20 Distance	20/40 with 2.8x
20/40	20 ft.	10 ft.	56ft.
20/60	13 ft.	6 ft.	36 ft.
20/80	10 ft.	5 ft.	28 ft.
20/100	8 ft.	4 ft.	22 ft.
20/120	6 ft.	3 ft.	16 ft.

The second chart gives the same information but compares the distances with those of a student with lesser acuities who is reading the 20/40 line with a 4x telescope.

Entering Acuity	20/40 Distance	20/20 Distance	20/40 with 4x
20/100	8 ft.	4 ft.	32 ft.
20/120	6 ft.	3 ft.	24 ft.
20/160	5 ft.	2.5 ft.	20 ft.
20/200	4 ft.	2 ft.	16 ft.
20/240	3 ft.	1.5 ft.	12 ft.
20/280	2.5 ft.	1.25 ft.	10 ft.

Benefits Of Using A Monocular

1. In the classroom, the student may use a monocular to view the blackboard from his seat and avoid having to walk up to it. This will make copying easier.
2. The student can read materials from a distance. This comes in handy in a store, during a sports activity, or on a field trip.
3. By using a monocular, the student can identify people at a distance this helps him feel more confident in social situations.
4. The monocular is small and portable, and can easily fit in a pocket or purse. It promotes more efficient and independent outside travel.
5. The monocular can be used so the person with low vision can participate in leisure or spectator activities such as bowling and football games.
6. The monocular gives the proficient user a sense of freedom when he knows he has access to the distant visual environment.

Things You Should Know Before Using ENVISION

1. The eye for which the device was prescribed
2. Your student's dominant hand
3. Your student's tolerance for glare
4. The correct viewing end of the monocular telescope
5. The correct distance for your student to view the blackboard
6. What's in your student's eye report
7. What's "in focus" and "out of focus" to your student may not be exactly the same for you, but it should be close to the same "in focus" point
8. How to include monocular telescope training in your student's IEP
9. Safety issues concerning use of monocular telescopes
10. The power of the monocular telescope recommended by the low vision clinician
11. The features and capabilities of the optical devices you will be using as tools
12. If the student should be wearing prescription spectacles while using the device
13. The best lighting to use during training

Things To Do Before Using ENVISION

1. Have the parents sign a release form that allows you to talk freely with your student's school staff, certified O & M specialist, and eye care professionals. Then, talk with them about how you may help the student in his monocular skills training.
2. Obtain and read your student's eye report.
3. Become familiar with monocular telescopes and their proper use and handling.
4. Become familiar with your student who has a visual impairment and his strengths, weaknesses and needs.
5. If your student has no concept of "in focus," you may demonstrate the concept to him by putting a bright picture of a familiar object on the overhead projector (Cowan & Shepler, 2000, pp. 146-147). Allow your student to adjust the machine to bring the image into focus. If clearer focus can be achieved after the student has tried, adjust it for him so that he may see the object when it is "in focus." If, after several trials he still does not understand the concept, you may need to refer him back to the low vision optometrist for an explanation and recognition of the concept, and for pre-training.
6. Complete the informal Student Information Sheet. (See page 37.)

Pre-Monocular Activities for Teacher and Student

For students who have no prior experience with a monocular telescope.

1. Give your student a cardboard tube. Explain that the monocular telescope is shaped like the tube. Allow your student to look through the tube to see light at the far end. Explain that a monocular telescope is like a tube that magnifies things in the distance. It has special lenses somewhat like an astronomer's telescope.
2. Help your student identify his dominant eye and dominant hand. Start out holding the tube to the dominant eye with the dominant hand. The student should be allowed to switch hands if it is more comfortable for him.
3. Show your student how to hold the tube correctly, that is, level, with his head upright, his hand wrapped securely but lightly around the tube. Let him practice. Make sure he sits or stands with his back straight.
4. Talk to your student about the responsibility of using a monocular. Talk about the issues of storage, care, and cleaning.

ENVISION

Informal Student Information Sheet

Student Name _____ Date _____

Grade Level _____ Teacher _____

Diagnosis, if known _____

TO BE ASSESSED	RESULTS	COMMENTS	RESOURCES	SUGGESTIONS
Presence of Eye Report			Student File	Ask parents to provide
Presence of IEP			Student File	Discuss with parents
Assess Distance Vision			Student File, Eye Report Vision Teacher Student Parents Personal Observation	
Assess Near Vision			Student File, Eye Report Vision Teacher Student Parent Personal Observation	

Informal Student Information Sheet

TO BE ASSESSED	RESULTS	COMMENTS	RESOURCES	SUGGESTIONS
Assess Peripheral Visual Fields			Student File, Eye Report Vision Teacher Student Parent Personal Observation	
Learning Style Visual Audial Kinesthetic			Student File, Eye Report Parent Student	
Optical Devices Needed			Student File, Eye Report Parent Student	
Lighting Modifications, Colors, and Filters			Student File, IEP Parent Student	
Effective Use of Contrasts			Student File, Eye Report Student File, IEP Student	
Preferred Formats Regular Print Large Print (size) Braille Speech Electronic			Student Parent Vision Teacher Past Teacher	
Need for Rest			Student File, Eye Report Student File, IEP Student Parent	

ENVISION I

Skills and Topics Presented in Envision I

Students 10 and Younger

Skill	Where Found
Parts Identification	
Ocular Lens	Preparation Diagram Page
Objective Lens	Preparation Diagram Page
Barrel	Preparation Diagram Page
Adjustment Ring	Preparation Diagram Page
Lanyard	Preparation Diagram Page
Cleaning	Lesson 1.1
Storage	Lesson 1.1
Retrieval	Lesson 1.1
Readiness	Lesson 1.1, 1.2
Identify Dominant Eye	Pre-Monocular Activities
Identify Hand to Use	Pre-Monocular Activities
How to Grip Telescope	Lesson 1.2
Positioning Telescope	Lesson 1.2
Stabilizing Telescope	Lesson 1.2

Skill	Where Found
Localization Without Telescope	
Spotting	Lessons 1.1, 1.3
Scanning	Lessons 1.8, 1.9
Ambient Sound Use	Lesson 2.2
Concepts to Learn	
In Focus	Things to Do, Lesson 1.1
Out-of-Focus	Things to Do, Lesson 1.1
Multiple Planes	Lessons 1.4, 1.7, 2.1
Spotting	
Without Telescope	Lessons 1.1, 1.3
With Telescope	Lessons 1.1, 1.3
Using Sounds	Lesson 2.2
Using Colors	Lesson 2.3
Focusing	
Under 20 feet	Lessons 1.1, 1.7, 2.1
Over 20 feet	Lessons 1.4, 1.6, 2.1, 2.2
Single Plane	Lessons 1.8, 1.10
Multiple Planes	Lessons 1.4, 1.7, 2.1
Tracing	
Moving Left to Right	Lessons 1.5, 1.6, 1.7
Short lines	Lesson 1.5
Long Lines	Lesson 1.5
Wavy Lines	Lesson 1.5
Convoluted Lines	Lesson 1.5

Skill	Where Found
Scanning	
Moving Left to Right	Lesson 1.8
Using Zigzag Technique	Lesson 1.8
Identification	
Symbols	Lessons 1.4, 1.5
Pictures	Lessons 1.4
Numbers	Lessons 1.5
Street Signs	Lesson 2.2
Words on Chalkboard	Lesson 1.5, 1.11
People	Lesson 1.6
Objects	Lessons 1.7, 2.1, 2.3
Tracking	
Moving People	Lessons 1.6
Moving Objects	Lessons 1.7
Single Plane	Lessons 1.7
Multiple Planes	Lessons 1.7
Leisure Use	
Indoor Events	Lessons 2.4, 2.5
Outdoor Events	Lessons 2.4, 2.5
Television	Lesson 2.4
Movies	Lesson 2.5
Independent Use	
Indoor	Lessons 1.10, 2.5
Outdoor	Lesson 2.5
Self-Advocacy	Lesson 1.10


Bamville Zoo
STOP

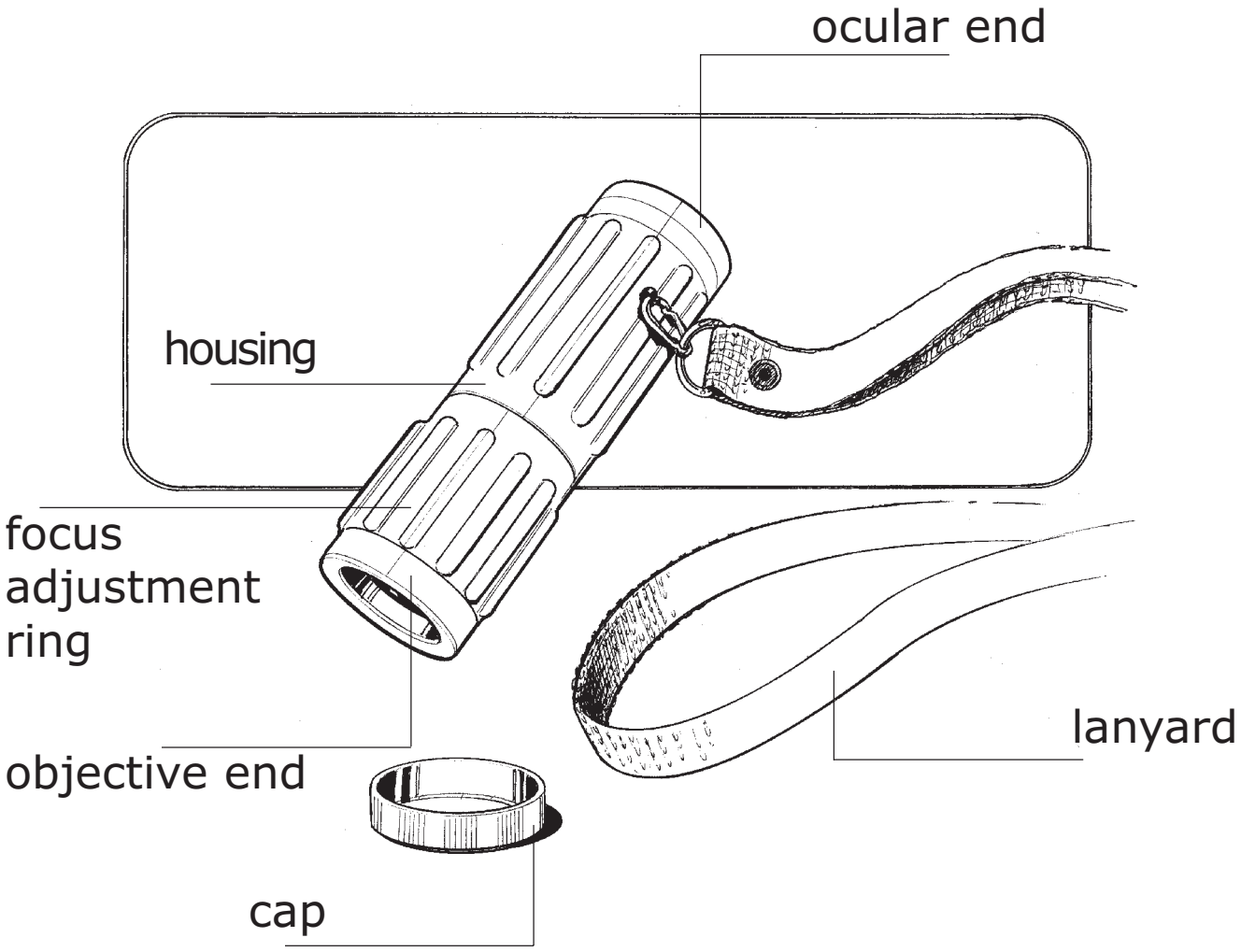
Chapter 1

ENVISION I:
Indoor Skills

Vision Enhancement Program
Using Distance Devices

For Students 10 and Younger

Parts of the Monocular



Lesson 1.1

Holding and Focusing the Monocular

Objective:
Your student will focus a 2.5x (or other power as prescribed) monocular on a brightly-colored puppet and describe what the puppet is doing.

Materials:

- A 2.5x monocular telescope (If your student's clinician has recommended a different power of monocular telescope, be sure to use the power recommended.)
- Emmy the Emu puppet or other puppet or toy
- Emmy the Emu story

Procedures:
If your student does not wear spectacles, remove the spectacle clamp from the device. Tell the student the following story, or make up one to introduce the puppet. Bring out the puppet and the 2.5x magnifier, acting out the story as you tell it:

ENVISION I

Emmy Finds a Curious Tube

by Elaine Kitchel

Not so very long ago, out in the warm, desert wilderness of Australia, there lived a large, colorful bird. She was green and had a yellow head and stood as tall as a human. Her name was Emmy.

Emmy was an emu, a very large bird with glorious feathers. Her cousins were brown with blue heads, and they were even bigger than Emmy. All the emus stared and laughed at Emmy because she was so brightly-colored. You see, most emus and ostriches blend into the colors of the desert. But not Emmy; she nearly glowed in the Australian sun as she preened her bright green feathers and shook her yellow head. She did not care that the other birds laughed and called her names like "Neon Nellie" because she actually believed her feathers were lovely. She was not ashamed to be colorful.

Another emu was glad that Emmy was colorful too. Emmy's mother had very poor vision and had lots of trouble seeing her children as they ran and played and kicked sand on one another. But even though she could not see Emmy's brothers, Ernest and Ethan, she could always spot the flash of sun on Emmy's yellow head. She always knew where Emmy was.

One day, while playing in the bushes, Emmy saw a truck rolling across her favorite sandy spot. Two men got out

and with their long-handled tools, they dug around in the sand. After some digging, they each took a drink of water. One of the men reached in his pocket and pulled out a little black tube and held it to his eye. He pointed the tube straight at Emmy, so she flapped her big green wings and kicked up some sand as if to say, "This is my playground."

It wasn't long before the two men got in the truck and left. Their tires left long lines in the sand. Emmy decided to follow the lines in the sand, but when she got to the spot where the men had been, she saw that one of the men had dropped his black tube in the sand. She looked at it very hard. It was just a short little tube. She picked it up and held it to her eye as the man had done.

She gasped. The far away shrubbery looked so close she reached out to touch it! But of course it was not really that close. She saw her mother watching her, so she looked at her mother through the tube and was so surprised to see every feather on her dear mother's head. This was a wonderful tube!

Emmy ran as fast as she could to show the tube to her mother. She thought it must be magic. "Mother, mother, I have found the most wonderful thing," she said.

Emmy's mother looked through the tube. She gasped and nearly shouted, "Oh my, I can see your brother Ernest playing in the sand!" She looked again through the tube and exclaimed, "Oh this is indeed a wonderful thing! With

this, I can watch my children and see them as I never have before." Big tears of happiness rolled down Emmy's mother's downy cheeks.

Emmy looked at the tube more closely. On the side it had the letters M-O-N-O-C-U-L-A-R. "That spells 'monocular,'" said Emmy's mother. I'm not sure what it means, but I will keep it safe with me until the men come back to get it."

Many weeks and months have passed. The men still have not come back to claim the monocular. Until they do, Emmy's mother proudly watches her children race across the desert, flapping their huge wings. "Emmy, the one with the green wings, is my child," she proudly tells the other mothers. By now, all the ostriches and emus have heard the story of how Emmy found the wonderful tube. They each have had a chance to look through it. They all agree, it makes the world clearer and more beautiful. They have stopped calling Emmy names. Now they just call her Emmy, the beautiful emu.

1. Show the student a monocular telescope and explain that a monocular telescope can be used to see his friend Emmy the Emu in the distance. Have Emmy explain how we sometimes call monocular telescopes, "monoculars." Show the student the ocular end or viewing end of the telescope. Show him how to grip the telescope by wrapping fingers and thumb around the ocular end of the telescope and pressing his index finger and thumb against his orbit to block out light.
2. Show the student how to take the monocular telescope carefully out of its case, gripping it firmly with thumb and fingers. Show the neck strap (lanyard) and explain that it is important to use it to prevent dropping the monocular. Then show him the RollBuster II. Explain to him that while carrying the monocular, between uses, he may wish to keep it in the RollBuster II, which is padded and offers good protection. Show him how the RollBuster II may be fastened to his desk as well.
3. Before giving the monocular telescope to the student for the first time, focus it for the distance of 10 feet so the student will have minimal adjustment at first.
4. Place or hang Emmy the Emu puppet in the distance at the same height as you, about 10 feet away. Make sure that the student is in a sitting position. Show the student the focus adjustment

ring. (If the student is unable to see Emmy from that distance, move him closer until he can see Emmy without the monocular.)

5. Allow the student to hold the ocular end of the monocular telescope to his eye and attempt to focus on Emmy. Allow the student to stabilize the telescope by leaning on his elbow or by holding his arms tightly to his chest. Using hand-over-hand, help the student locate Emmy.
6. Show the student how to look at the target in the distance (Emmy puppet), then help him bring the monocular to his appropriate eye with his dominant hand. Using hand-over-hand, demonstrate how the student may turn the focus adjustment ring with his non-dominant hand while he looks through the telescope.
7. If the student has color vision, ask the student what colors Emmy has. Ask him whether he can tell if Emmy is sleek or fuzzy, or what shape her beak is.
8. When the student says that Emmy is very clear when viewed through the monocular, go to Emmy and put the puppet on your hand, leaving the student to operate the monocular.
9. Ask the child, "What is Emmy doing now?" (Opening and closing mouth, singing, hiding, sitting on teacher's head, kissing teacher, nodding, etc.) When the student uses the monocular for the first time, confine the puppet's

movements to the space around the teacher's head so the student does not have to scan. Repeat #9 until the student can easily focus the telescope at both 10 and 15 feet.

Important: The teacher may have the student sit close enough to the target to easily focus and describe what he sees. Because the teacher has already adjusted the telescope for the correct viewing distance, only minimal fine adjustment should be necessary by the student. If the student is having too much difficulty or is turning the focusing ring more than a small amount, he probably will not find his target and may need help in beginning again.

Enrichment Activity: Help the student make a sock puppet to be Emmy's friend. After the student has played with the puppet, show the student how to put the sock puppet over a 20 oz. plastic soft drink bottle to make it freestanding. Allow the student to place the standing puppet on a table, then view the puppet from several feet away using the monocular.

Note: It is recommended for sanitary reasons that only the teacher handle one puppet included in your ENVISION I materials. If you would like your student to have an Emmy the Emu puppet of his own, an extra is included in the kit. Additional puppets are also available from APH.

Lesson 1.2

Caring for the Monocular

Objective:
The student will demonstrate proper care of a monocular.

Materials:
- Monocular, as recommended by a low vision clinician
- Emmy the Emu puppet
- RollBuster II

Procedures:
1. Using the Emmy Puppet, make Emmy show the student the objective lens, ocular lens, housing, and focusing ring (if applicable).
2. Allow Emmy to demonstrate to the student:
    - the neck strap should be worn to prevent dropping and breakage
    - the monocular can be kept in the carrying case or the RollBuster II between uses, or when the student is using it to work at his desk
3. Tell the student he may keep the monocular's lenses as clean as possible by following these methods:

- not touching the lenses
- handling the monocular with only clean hands

4. Have Emmy show the student how to gently wipe the lenses with a clean, damp, soft cloth when the lenses get smudged. Do not use a paper towel, since it could scratch the lenses.
5. Ask the student to correctly demonstrate cleaning and drying of the lenses. Air-drying or use of a soft cloth are preferred methods. Then have him place the lens cap on the monocular. Now allow the student to place the monocular in the RollBuster II and zip it up. If you wish you may attach the RollBuster II to the student's desk with the Velcro® on the bottom of the RollBuster II.
6. Explain to the student that the monocular should always be stored in its case or the RollBuster II to prevent accidental scratching of the lens. The lens caps should always be on the monocular when not in use. Do not submerge a monocular in water.

Enrichment Activity: Allow the student to practice cleaning the monocular with a soft damp cloth, followed by a soft dry cloth. Keep Emmy handy to tell the student what a good job he is doing. Then have Emmy sing the following jingle to the tune of "Row, Row, Row Your Boat."

Lens Cleaning Song

Rub, rub, rub your lens

With a cloth so soft.

Every time you get a smudge,

Wipe your lenses off.

Repeat the song with the student, while he cleans, until the student cleans the lenses appropriately.

Lesson 1.3

Using the Monocular to Observe

Objective:
The student will describe gross and fine movements of the teacher who is standing in place indoors.

Material:

Monocular telescope, as recommended by a low vision clinician

Procedures:

1. Stand in the front of the blackboard at a distance of 10 feet. Ask the student to locate you with his eyes then bring the monocular up to his dominant eye. Now he may focus the monocular on your upper torso. When the student has sufficiently focused the telescope, slowly move your arms up and down and in various positions. Try to keep your movements close to your torso. Say to the student, "Tell me what I am doing." Give the student time to describe your movements:
   - "I see you are waving your arms."
   - "I see you are pointing to your head."
2. Now tell the student you will be moving your legs. Let him find your legs with his eyes before bringing the monocular up to his eye. Once he indicates the monocular is focused, move your

legs in various positions and again ask the student to describe the actions. Give him auditory feedback about whether he is correct.

3. When the student is able to describe gross movements, such as kicking, toe pointing, and hopping, ask the student to focus on your face. Note if he first locates your face with his eyes before bringing up the monocular. Ask him to describe what he sees your face doing. Take the opportunity to smile, open and close your eyes, frown, look surprised, etc. Always give feedback for answers.
4. Next, near your face, hold up one finger, three fingers, make a fist, wave hello. Ask the student if he can see and describe what you are doing. Make sure to reward the student for correct answers. The Emmy puppet can give praise, for example. Repeat this exercise at 15 feet.
5. Tell the student that though there is a wide range of monocular telescopes, his low vision optometrist has recommended just the right one for him.

Enrichment Activity: Read or tell the student the following story about Emmy the Emu:

ENVISION I

Emmy Learns to Count

by Elaine Kitchel

It was a bright, sunny day when Emmy learned to count. She sat in her desk and listened to her teacher, Miss Bryant, talk about counting and how everything could be counted, even things as small as grains of sand and things as far away as stars. Soon, Emmy heard the other emus around her counting something, but it was a bad day for Emmy's vision and she could not see what they were counting. She loved the rhythm as all the little emus counted 1-2-3, then 4-5-6. They said it over and over again, 1-2-3, pause, 4-5-6, pause, 1-2-3, pause, 4-5-6. Emmy wished she had her monocular to see what they were counting, but she had misplaced it.

Just as Emmy was wishing, her friend Kris leaned over to her and said, "Hey Emmy, why aren't you counting your toes like all the others?"

"So that is what they are counting," Emmy said out loud. "I wonder how many toes I have? I have never counted them before." Emmy looked at the floor and tried to see her toes. She could see her feet but she couldn't quite make out how many toes she had. Quick as a wink, she stuck her left foot up in front of her face. (Emus can do that, you know.) And bright as day she could see that her left foot had 3 toes. Then she put her left foot down and stuck her right foot up in front of her face and what do you know?

She had three toes on that foot also! When she added them together, she had six toes!

"One-two-three, four-five-six," Emmy said along with the other emus. She was so proud to be counting. Then she remembered that her monocular was in her backpack. Emmy retrieved the device and held it to her eye with her right wing as she focused it with her left. WOW! She could see all the emus as they put their feet up and counted their toes. Even Miss Bryant was counting her toes. It looked almost like dancing with all the emu feet and toes moving up and down. Emmy laughed with all the other emus.

How many toes do you have? Emmy wants to know. (If age appropriate, have Emmy clap as your student counts his toes, or as he tells Emmy the number of toes he has.)

Slightly older children may want to use the monocular to count other things in the classroom such as desks or windows.

Lesson 1.4

Viewing Targets from a Distance

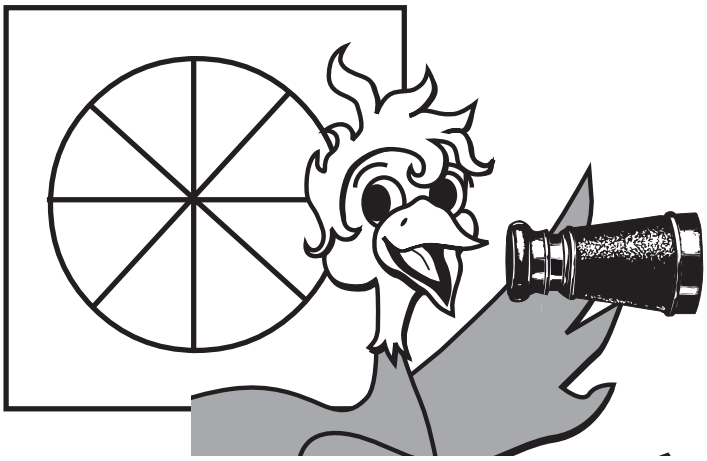
Objective:
The student will view cards at distances of 20, 30, and 40 feet. The student will be able to adjust his monocular telescope for several distances and describe what he sees.

Materials:
- Monocular, as recommended by a low vision clinician
- Cards from the Materials Tote:
  - Black and white checkerboard
  - Black and white triangle
  - Black and white striped ball
  - Black and white pie chart
  - Blue and white wheelchair
  - Blue and white stairs
  - Street name sign

Procedures:
1. Ask the student to stand 20 feet from you and focus his monocular, using the pie chart card as the object of focus. Be sure to place the card at eye level. Allow the student to support his arms, if needed to stabilize the monocular.

2. Check to make sure the student has his monocular focused. Then show him the cards one at a time and ask him to describe them. Accept any description which is appropriate for the content of the card.

3. If the student has trouble seeing the cards, check to make sure the monocular is focused properly. Check to be certain he is first, looking at the card, then bringing the monocular to his eye. If he is following procedures and focusing properly using the focus ring or gently turning the ocular and still cannot see the cards with his monocular, move five feet closer. If he still cannot see the cards, make sure your student understands "in focus" (see Things To Do Before Using ENVISION). If there is still a problem, consult the clinician.



4. If the student has no problem describing the objects on the cards, move back five feet, add new cards and ask him to describe the cards again. Repeat this process up to 30 feet of

distance between you and the student. (You may have to go out in the hall to achieve this distance.) You may want to have another student hold the cards for your student. Walkie-talkies can be used to communicate with one another. These make the activity lots of fun.

5. Once you have achieved the 30 ft. distance with the student identifying all cards, gather a new group of cards. Any or all of the cards from the set are appropriate for this exercise. If you do not achieve the 30 ft. distance, it could be because of the limitations of the monocular telescope. Allow the student to stop at the upper limit of the distance viewing he is able to achieve.
6. If your student's telescope is powerful enough, show the cards to the student from the 40 ft. distance. If he can describe the objects, you will know he has good use of his monocular in various ranges of distance.

Enrichment Activity: Read the following story to your student.

ENVISION I

Emmy Gets Spring Fever

by Elaine Kitchel

Emmy twitched at her desk and shuffled her feet. It was a beautiful day outside, and she was having a hard time focusing on her math assignment. She leaned her head over and gazed at the clear blue sky outside. She heard birds chirping and kindergartners laughing as they played during their recess. If only I could go outside, she thought to herself. She dreamed of playing jump rope with her friends.

"Emmy." It was Miss Bryant's familiar voice. "Emmy, are you finished with your math assignment?"

"No, Miss Bryant. I can't do my math assignment."

"Why not? You can see the board with your monocular can't you?"

"Yes I can," replied Emmy.

"You know how to hold a pencil, don't you?"

"Yes I do," replied Emmy with a big yawn.

"Then explain to me why you can't do your assignment," questioned Miss Bryant.

"Well, Miss Bryant, I'm not positive, but I really think I have spring fever."

"Spring fever? You mean you have allergies?"

"No Miss Bryant. Well yes, maybe. I am allergic to math, and I need to go outside. Isn't that what spring fever is?"

Miss Bryant laughed. It was almost lunchtime and all the students were getting restless. "Why, yes, I suppose you could call it spring fever. I'll tell you what, this afternoon, we'll all go somewhere for an extra-special activity. Doesn't that sound like fun?"

Emmy had to admit it sounded better than her math assignment.

After lunch Miss Bryant read the class a story. It was about a human boy who lived with his parents in an apartment above the office at the zoo. This boy was lucky because each day animals would be near and he could look at them through his bedroom window. Monkeys and deer were almost close enough to pet. Sometimes he got to play outside among the tall grasses in the kangaroo exhibit.

One day a little wallaby came right up to him for a short visit. The boy got to look at the lions and giraffes from a distance using binoculars, which are like two monoculars, one for each eye.

He had lots of fun, Emmy thought. It would be so exciting to see those animals and hear the music of toucans and macaws.

"Now class," said Miss Bryant, "let's put on our hats. We are going to the auditorium for a special assembly. We are going to see a zoo show put on for us by the Emuville Zoo. It's going to be very educational."

One of the boy emus, Richard, said he didn't think the animals wanted to come to the school, but Miss Bryant said he should wait and see. "Kris and Emmy, bring your monoculars. I'll bring my opera glasses," she said as she grabbed something which looked like two monoculars hooked together.

The students and their teacher marched around the school toward the auditorium. When they arrived at the auditorium, they only saw a bald man and a lot of empty chairs. Then more students filed in, and then the lights went very dim.

"Oh look," said Maggie, "there's a swan!" She pointed to the stage. A hush fell over the students as they peeked up toward the stage to see a huge white bird with a graceful neck and incredible, snowy wings. The swan swam in a little pool and spread its wings for the students. It even stretched its neck out and let out a call which sounded like the horn on a car.

Then the zoo man brought out a huge snake. The snake was bigger than anyone had ever seen in Emuville. It had brown

and silver patterns on its back and seemed kind of sleepy. The zoo man said it was an "anaconda," and it came from the rain forest of South America. The first graders were speechless. Miss Bryant let the students look through her opera glasses. One by one the students said quietly, "I can even see the tiny diamond patterns on the snake's back. They are so frosty and beautiful." The students seemed to like looking through the opera glasses too.

When the next animal came out, Emmy looked at the spot where the students were pointing. She couldn't see a thing. After lifting her monocular to her eye and adjusting the little outer ring a bit, a single brown figure appeared in her sight. As it came to center stage, she realized it was a bear cub. It was fluffy and cute but had very sharp teeth and claws. Emmy had never seen anything so sad as the orphaned bear cub. Just then, Richard, bumped her monocular; she let out a little squeal, and the cub was out of focus again.

After watching the bear for a moment, Emmy turned to Richard and showed him how to focus the opera glasses. They were very much like her monocular. Richard put the opera glasses to his eyes. "Wow," said Richard. "This thing is cool! I could get used to this!"

"Yep," said Emmy. "Telescopes are really cool."

Emmy felt more satisfied than she had in a very long time. There was plenty to see with her monocular. When she used it to look at the world around her, she felt good.

Take your student, along with his monocular, to a school play, assembly, ballet, concert, or other presentation if possible. Select items for him to spot and describe while looking through his monocular. These items should be at a distance of 20 feet or more from the student. (Little, if any adjustment of the focus should take place for distances above 20 feet. Focusing at distances nearer than 20 feet requires more adjustment.) Have him describe actions and objects in the presentation and also any interesting objects within the environment of the presentation. Give him the opportunity to look at items that he may have never seen up close before. Ask him to describe what he sees. Be sure to support his positive comments about what he is able to see through the monocular telescope.

Lesson 1.5

Tracing with the Monocular

Objective:
Student will systematically trace lines of target words and pictures from left to right.

Materials:
- Monocular, as recommended by a low vision clinician for best viewing of the blackboard from student's seat
- Several street names, numbers or object cards from Materials Tote
- Several additional lines of words written across the black board (additional letters or pictures for younger students)

Procedures:
1. Beginning at the top left corner of the blackboard, tack or otherwise place the cards across the board in at least two straight lines (letters or pictures for younger students). Ask the student to focus his monocular on the blackboard.
2. Say to the student, "Look at the top, left corner of the blackboard and read the word," (or identify letter or picture). Draw a bold, white line connecting the cards. If a younger student is not sure where "top, left" is, help him find the first picture or letter.

3. Then say to the student "Can you read the rest of the line?" or "Tell me what the next picture is." If needed, help the student move from the top left to top right.
4. Once the student reads the last one on the first line, tell him to follow the edge of the bottom of the line he has read back to the beginning. Tell him to drop his view down a tiny bit to locate the beginning of the second line. Say to the student, "Beginning from the left, read the second line (or identify the letter or picture)."
5. Ask the student to continue reading the subsequent lines, always following the lower edge back to find the next line.
6. Reinforce the student with praise as he continues tracing forward with the monocular, then backward on the same line before dropping down to read words on the second line, third line, and subsequent lines from left to right.
7. Rearrange the positions of the words, letters, or pictures vertically, and ask the student to read the lines again beginning with the top, left and moving downward.
8. Repeat 6 and 7, substituting short, boldly-written words on the chalkboard, until you are certain the student can trace words written boldly on the blackboard at the distance from his seat to the blackboard.

9. With chalk, draw a wide, meandering line in the hall or on the sidewalk. Make sure the line crosses over itself two or three times. Write a bold word at the end of the line. Ask the student to focus the telescope on the beginning of the line and then slowly, visually follow the line to its end. Ask the student to read the word at the end of the line.

Enrichment Activity: Place yellow (or other bright color) Post-it® Notes end-to-end in a meandering path along the walls of the room near the student's eye level. Place a star card at the end of the path. Ask your student to first locate the beginning of the path with his monocular. (It should begin on the student's left.) Then ask the student to use the monocular to trace the path as it meanders around the room. When he reaches the end, ask him to identify what is on the card. Ask him to repeat the exercise, this time with a different card at the end. You may want to recite this little poem during the tracing exercise.

Tracing Poem

Keep your eye on the yellow brick road.

You don't want to trip on a rock or a toad.

Always start left and move to the right,

Keeping yellow bricks in your sight.

Lesson 1.6

Finding People

Objective:
The student will find a familiar person among a group of people.

Materials:
- Monocular, as recommended by a low vision clinician
- Group of familiar, seated students, friends, family or adults

Procedures:
1. **Seated People -** Begin by taking the student to a setting where there is a group of people with whom he is comfortable. They may be students, parents, or other adults, or the student's family, or younger students. The situation should be one in which the student is comfortable with others seeing him use his monocular.
2. Ask the student to stand 20 to 25 feet away from the seated people in a row, if possible. Ask him to focus on the person who is on his left as the student faces the people.
3. When the student is able to demonstrate that he can identify something about the person (such as, the lady with the yellow hat), ask the student to slowly move his head and the monocular to the right.

4. Remember, the student should hold the monocular close to his eye and stabilize it with his dominant hand while continually adjusting the focus. The amount of adjustment should be minimal at the suggested distances.
5. Ask the student to continue focusing on the people until he reaches the last person on the right. After he has examined the row, ask him to trace back to the left the same row and describe the characteristics of somebody he knows. If he doesn't know anybody in the row, have him trace back to the left and describe the characteristics of the first person in the row.
6. If there are several rows of students or adults, have the student begin again on the left, moving to the row of students or adults directly behind the first and following that row to the right. Again, ask him to describe specific details as he did for #5.
7. **Moving People -** In a group of people who are moving, (that is, exiting an auditorium, on the playground, at the bus stop) ask the student, who is in a stationary position, to quickly scan the group beginning on the left and moving to the right.
8. Again the student should hold the monocular close to his eye and stabilize it with his dominant hand while adjusting the focus, when needed, with his non-dominant hand. The amount of adjustment should involve minimal movement left or right.
9. Ask the student to identify any familiar person.

10. Then ask the student to scan the group and find a particular person. Say to the student, "Can you find Charles?" Remember to reinforce left to right movement during the scanning process.
11. Verbally reinforce the student if he identifies someone by using his monocular.
12. The student may need to scan from the left, to the right, and then to the left again in a zigzag pattern several times before finding the particular person. Be patient with your student.

Note: Not all students are comfortable using their monoculars in front of the other students, especially if they are just learning. Be sensitive to your student's feelings and try to arrange practice situations which are comfortable for the student. In some instances you may need to teach the student's parent or sibling how to do the scanning exercise and allow them to coach the student at home until the student is more comfortable in a public place. If your student has trouble identifying people at about the 20 to 25 foot distance, his telescope may not be powerful enough for the exercise. If scanning groups of people and the indoor environment is important to your student's daily functioning, confer with the low vision clinician about the need for an additional, more powerful telescope.

Enrichment Activity: Read the following story to your student

Someone Famous

by Elaine Kitchel

Emmy took the rollers out of her head feathers as she watched her favorite TV character, Big Boyd, sing and dance a jig. Every day she watched the show, Caraway Street, when she got home from school, and she loved the large, goofy creature they called Big Boyd. "You'd better turn off that show and get ready to go," Emmy's mother called from the next room.

Emmy was excited because she was going to a play. Her brothers, Ernest and Ethan, were to be in the play too. They wore bear costumes and bounced up and down on the sofa. They were going to be "extra" bears in the school production of Goldilocks and the Three Bears.

Emmy put her best pink bow in her head feathers and looked at herself in the mirror. She looked quite spiffy, she thought.

"Is everyone ready?" her father called out to the family.

One by one the voices all chimed, "I'm ready."

Soon they were all in the family station wagon hurrying to Ernest and Ethan's school. Ernest and Ethan picked little balls of fur from their costumes and threw them at each other as they rode along.

"Here we are!" announced, Mr. Lightfeather, Emmy's father.

Ernest and Ethan bounced out of the car and ran into the school as fast as they could. Mr. Lightfeather put his wing around Emmy. "You are going to meet someone famous tonight," he said. "You are in for a big surprise!"

"Who, Daddy? Who is the famous person I'm going to meet?" squeaked Emmy.

"Uh, huh," said Emmy's father, pointing his pointer feather at her. "If I told you it would ruin the surprise. You'll have to wait and see."

"Phooey," said Emmy.

Emmy and her parents took their seats in the auditorium. Emmy took out her monocular and looked at the stage. It was decorated with big man-made trees and floppy, yellow, paper flowers. A little red cottage stood in the background. She scanned the audience and located her friends Sarah and Pamela who were sitting with Sarah's parents. Suddenly the music started and all kinds of kindergarten emus entered, all dressed-up as woodland animals. Ethan and Ernest were playing and jumping with squirrels, raccoons and groundhogs. Everybody laughed and cheered as the woodland animals sang "Teddy Bear's Picnic."

Soon, Ethan and Ernest's little friend, Maggie, entered dressed as Goldilocks. She sang a song in her sweet little voice and everyone clapped. Right away she entered the house of the three bears, sat in their chairs, ate their porridge and fell fast asleep in Baby Bear's Bed.

Soon the Three Bears came home. Emmy thought she recognized the voice of Papa Bear. It was a sweet, golden voice, so familiar to her, but she just couldn't think of whom it belonged to. As Papa Bear went through the house singing and putting things away, he sang a song about the joys of raising a baby bear. As he sang, the whole audience began to sway and sing with him.

Emmy could stand it no longer. She leaned over to her mother and said, "Who is singing? Who is playing the part of Papa Bear?"

"Why, my dear Emmy, don't you recognize that voice? It is the voice of your favorite television personality, Big Boyd, from Caraway Street!"

"Why of course!" exclaimed Emmy. It was indeed the voice of Big Boyd. Out of excitement, Emmy almost dropped her monocular. Luckily, it was on a chain around her neck.

Emmy's mother leaned closer. "I think you are going to get to meet Big Boyd after the play is over."

Emmy could hardly sit still. She enjoyed the play but couldn't stop thinking about meeting Big Boyd. Should she shake feathers? Should she curtsy? Just WHAT should she do?

Before Emmy could think any more about it, the big green curtain came down and everyone stood and clapped for the students and their special guest star. Folks clapped and whistled, then lined-up for cookies and punch.

Emmy tugged on her mother's scarf. "Hey Mom, when am I going to meet Big Boyd."

"Are you Emmy?" someone asked, tapping on her shoulder and speaking in a familiar voice.

Emmy spun around so fast the pink bow flew out of her head feathers and into the punchbowl. She whirled so fast she fell right into the friendly golden paws of Big Boyd. He hugged her, then stood her up. "My goodness Emmy," he said breathlessly, "you are so eager. I am very pleased to meet you. Someone told me that you are my biggest fan! Tell me about this necklace you are wearing."

"Hey, Big Boyd, this isn't a necklace, this is a chain with my monocular on it." She showed him the monocular. "When you put it up to your eye, you can see far away things very well indeed. I used it to watch the play."

Big Boyd held the monocular to his eye. "Well I'll be a monkey's uncle!" he said. "I can see the stage just like it was right here. This is very cool, Emmy! I think that the monocular is a fabulous invention."

Emmy felt as if she were flying all the way home. The car was warm, and she felt so sleepy. Her head spun as she remembered the big, soft hug from Big Boyd, and the beautiful songs of the play. She was glad she had her monocular to watch the play. She touched her neck and felt it there, then fell fast asleep dreaming of birds and bears.

Enrichment Activity: Arrange for your student to attend a play, opera, ballet, or comedy production. Ask the student to take his monocular along to view the production and to find his friends and acquaintances in the audience. When your student returns, ask him to make a tape describing the stage setting, the costumes, and the action of the production. Ask him to elaborate upon which parts he viewed with the monocular. You may wish to have him make a drawing or painting instead of a recorded tape.

Lesson 1.7

Tracking Moving Objects

Objective:
The student will learn and apply monocular skills in tracking objects and people as they move.

Materials:
- Monocular, as recommended by a low vision clinician
- Emmy puppet
- Large, brightly-colored ball at least 8” in diameter

Procedures:
1. Hold the large, brightly-colored ball at arm’s length from you at eye level with the student. Stand about 15 to 20 feet from the student and ask him to locate the ball visually, then bring the monocular up to his eye to spot the ball. Once the ball is in his view and the monocular is properly focused say, “Now I am going to move the ball to your right.” Take five slow steps to the student’s right. “Now I am going to move the ball to your left.” Take five slow steps to the student’s left. Check to see that the student is following the ball with the telescope.
2. Tell the student to locate the ball without the monocular and then focus upon it with the monocular. Now tell the student, “I am going to

move the ball slowly from the left side of the room to the right. I want you to move your head slowly, holding the monocular steady, and watch the ball as it crosses the room. Please tell me to stop if you should lose sight of the ball with your monocular." Repeat this exercise three times. If the student loses track of the ball, stop while the student locates the ball again and focuses on it through the monocular. Then move again until the student can track the ball across the room.

3. Repeat the exercise above, but this time have the student stand in the center of the room and follow the ball as you make a complete lap around the room. Make sure you stay the same distance from the student at all times. Repeat the exercise three times. Be sure to always begin on the student's left, moving to his right.

4. Standing a little to the student's left and about 20 feet away, ask him to locate the ball and bring it into focus with his monocular. Tell the student that you are going to move toward him for five steps. Ask him to keep the monocular focused upon the ball and move his head as needed to keep the ball in view. Slowly take five steps toward the student. Ask the student to tell you to stop if he should lose the ball from the field of view. Give him time to relocate the ball and, if necessary, refocus before moving again. Next, tell the student that you will take five steps backward. Ask him to keep the monocular focused

upon the ball and move his head as needed to keep the ball in view. Repeat this exercise three times. Remember to give the student time to adjust focus.

5. Now hold the Emmy puppet on your hand and ask the student to use the monocular follow the puppet as you walk around the room doing a full lap. Then, starting at 15 feet away, ask the student to follow the puppet with his monocular as you walk, first to the right, and then back to the left. Repeat this exercise two times. As you walk you may want to say this little poem for the student.

Tracking Poem

Start on the left

As Emmy walks right. (Walk toward the student's right.)

Always keep Emmy in your sight.

Move your head right

Then left again. (Here turn and travel to the student's left.)

Keep your eye on Emmy's chin.

Enrichment Activity: Repeat the above exercise in dim light, using a flashlight to illuminate Emmy. This time have Emmy wear a Hawaiian lei, a piece of Christmas garland, or a hat. Have Emmy carry a lighted flashlight in her mouth. Once the student is successful in tracking Emmy, reward him with the lei, the garland, or the hat.

Lesson 1.8

Learning to Scan

Objective:
The student will scan for specific target words, letters, or pictures.

Materials:
- Monocular, as recommended by a low vision clinician for best viewing of the blackboard
- Street names, numbers, or object cards

Procedures:
1. Randomly move the words, letters, or pictures from lesson 1.5 around on the board.
2. Ask the student to focus his monocular on the board. Say, "Using your monocular, look at the top, left, and move to the right to find the word, letters, or picture in order as they appear." Ask the student to remember to move in a systematic pattern.
3. Ask the student to describe each target word, letter, or picture when he has found it.
4. Make games of this exercise by telling the student to, "Find the first word (picture) which is used to _____," or asking him, "What is the next word (picture) after _____? What is the first word on line

two? What is the next word on line three?" Explain that this activity is called "scanning."

Reinforce your student as he finds the correct objects, cards or words. The Emmy puppet may cheer or whistle.

Enrichment Activity: Read the following story to the student, or if your student is a proficient user of his magnifier or large print for reading activities, you may ask him to read the story himself. Either way, you may want to have the Emmy puppet act out the story as you go along.

ENVISION I

Emmy and the Falling Stars

by Elaine Kitchel

Emmy woke up. It was the middle of the night. She heard voices whispering outside her bedroom window. Emmy held very still. There is no point in being scared, she told herself, not until it's clear there's a problem. Emmy listened to the whispers, wondering what they were all about. She recognized the scratchy voice of her brother Ethan, as he said, "Oh there's one, and another one too!"

Emmy peeked out the window. Even without her monocular she could see the three heads of her mother and her two brothers. She wondered what they were doing.

"What's going on?" she asked sleepily.

"We are watching the meteorite showers," Ethan remarked.

"What's a meteorite shower?" asked Emmy. She had never seen a star or a meteorite. Even with her monocular they were almost always too dim and too far away for her to see.

"Meteorite showers," answered Emmy's mother, "are when groups of meteorites fall to earth and you can see their fiery trails as they enter the earth's atmosphere. Some people call them falling stars."

"Do you think I could see the fiery trails?" Emmy asked. Without waiting for an answer, Emmy grabbed her monocular out of its case. She brought it to her eye and focused it as she had been taught in school, but she could see nothing but the black, midnight sky.

"There's one!" shouted Ernest, her other brother. He pointed to the western sky as he shouted. Emmy had been looking to the east, so she began studying the sky in the west through the lens of her monocular. "Wow!" yelled Ernest just as a small, but very bright object moved across Emmy's field of vision. "Did you see that one?"

"I think I did, I think I did!" cheered Emmy as she excitedly hopped around on one foot. "I think I saw it with my monocular!" Emmy tried for another hour to see more of the meteorite trails but never saw another one.

Later, as they all went back to their beds, Emmy remarked to her mother, "I'm glad I got to see a falling star, but I'd really like to see the stars that stay up in the sky. I've never seen one."

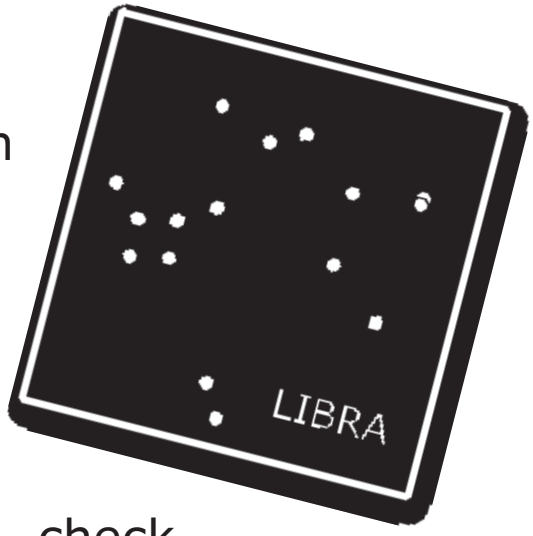
"Oh yes you have," said her mother. "You have seen the sun. Our sun is a star. If you were standing on a faraway planet, looking at our sun, it would look a lot smaller and paler than it does from the earth. It would look like what it is, a star."

"Cool," said Emmy. "I get to see at least one star every single day." Emmy was eager to tell her friend Kris all about how she had seen a meteorite's fiery trail AND the closest star, the sun.

Use all the cards from the card set that have stars on them. You should have eight cards:

- Flag with star
- Pinwheel star on yellow background
- Black and white five-pointed star
- Black and white twelve-pointed star
- Four constellation cards

Place the first four cards at various spots around the room. Then tell the child that, like Emmy, he will be looking for stars with his monocular. Ask the child to scan the room from left to right with his monocular, locating all the star cards.



Now ask the student to locate each star card as you call out its description. After the student indicates that he has found the card, check to make sure it is the one you have specified. If it is, be sure to compliment him on his success. If it is not the right one, ask him to try again. Now introduce the constellation cards. Allow the student to see them up close. Ask him to identify them from 10 feet using the monocular.

Add the constellation cards, then move the cards around and repeat this exercise until the student has found and identified all the star and constellation cards. Praise the student for his accomplishment. Repeat the exercise at 15 feet.

You may repeat the exercise if needed. Be sure to rearrange the cards between each exercise.

Enrichment Activity: Give the student some yellow paper and help him draw and cut out stars. Once the stars are cut out, punch small holes at the top and tie strings to them. Hang the individual stars from the crossbar of a clothes hanger and hang the whole assembly in a prominent place. You may ask the student to look at his star mobile with his monocular once it is hung. See if he can count the number of stars on the mobile.

Lesson 1.9

Preparation for Reading Continuous Text

Objective:
The student will use his monocular to read lines of continuous text and to find details of specific targets.

Materials:
- Monocular, as recommended by a low vision clinician
- Wall clock
- Cards from the Materials Tote:
  - Street name cards
  - Numbers cards
  - Constellation cards

Procedures:
1. Ask the student to stand in the center of the room and focus on the classroom clock. Ask him to tell you the time. If your student cannot tell time, ask him what numbers the clock hands point to.
2. Now allow the student to examine, up close, the four constellation cards from the Materials Tote. Explain to him how ancient shepherds watched the sky at night while tending their flocks. Tell

him how names were assigned to certain groups of stars that resembled common objects or animals.

3. Now put the four constellation cards in a row across a wall or the blackboard at about two-feet intervals. Ask the student to locate the first card, then scan from the left until he finds the second card. Ask him to identify each constellation as he finds it. (Don't worry if he cannot see the individual constellations; the names are on the cards in very large print.) Once he has identified the constellations, scramble them and repeat the exercise. If the student cannot read the name on the cards, allow him to move closer.

4. Use several of the street name and number cards from the Materials Tote. Place them across the blackboard in two rows. Place the cards 2 to 3 feet apart horizontally and about 1.5 to 2 feet apart vertically. Ask your student to stand about 20 feet away and scan the area from left to right until he locates the cards. Ask him to read the names and numbers to you. If he cannot, you might want to make sure the focus is correct. If he still cannot read the text, you may consider moving the student closer or farther away from the wall

where the cards are mounted. If these strategies do not help, your student may have trouble focusing or locating and may need to review previous lessons. If the problem is ongoing, you may wish to refer him back to the low vision clinician. The telescope may be functioning at its upper distance limit.

5. Repeat the exercises at a distance of 15 feet and again at 25 feet. This will allow the student to practice refocusing the monocular.
6. Write several lines of continuous bold text on the clean blackboard. Ask your student to scan the blackboard from left to right until he locates the text. Ask him to read the text to you. Make sure your student scans left to right, returning to the left to scan again. His head and monocular should travel in a subtle zigzag motion.

Note: If, when using the monocular, your student can see to read the cards from the Materials Tote and cannot read continuous text on the board, you may need to write heavier or bolder text.

Enrichment Activity: Send your student to the library, media center, or another classroom in which there is a large bulletin board display. It should be a display with which you are already familiar. Ask your student to study the bulletin board with his monocular, moving from left to right to left as he studies. When he returns have him tell you about the contents of the bulletin board, or let him draw a representation of it if he is able.

Lesson 1.10

Using the Monocular to Read the Blackboard and Advocating for Oneself

Objective:
The student will scan for information in specific areas of the board. The student will be exposed to the concept of self-advocacy.

Materials:

Monocular, as recommended by a low vision clinician for best viewing of the blackboard

Procedures:

1. Show the student what specific areas of the blackboard are used consistently by the teacher or by the class. Indicate where homework assignments are listed, where sample math problems are demonstrated, where the date is, etc. Allow the student to observe these areas with the monocular telescope while you or someone else points to them in turn.
2. Specify an area of the blackboard and ask the student to read what is written there. For example, say to student, "Using your monocular telescope, read out loud what it says about tomorrow's homework assignment."
3. Ask the student to use the monocular to locate the area where the teacher writes (usually the center of the blackboard).

4. Ask the student to read aloud what someone has written on the blackboard. (Make sure the writer has not written too lightly.)
5. Make sure the student tracks a writer's movements, as he continues to write. Ask the student to read each line aloud when it is completed.

Important: If the classroom teacher is not one who specializes in educating students with visual impairments, she should receive in-service training regarding the potential difficulties of using a monocular. The classroom teacher needs to be aware of the importance of consistency in using specific areas of the board for ongoing information. The student needs a teacher who understands how much easier it is for him to follow if the teacher consistently works from the left side of the board to the right. The teacher must understand that the student's field of view is limited when the student uses a monocular.

Enrichment Activity: Read the student the following story, or if your student is a proficient user of his magnifier or large print for reading activities, you may ask him to read the story himself. Either way, you may want to have the Emmy puppet act out the story as you go along.

ENVISION I

Emmy Gets Frustrated

by Elaine Kitchel

Emmy sighed deeply and put her feet up on her desk. She knew there was a rule against putting her feet on the desk, but she did it anyway. She was feeling something; she did not know what to call it, but she knew she did not feel happy. She let out another big sigh.

Ms. Bryant, Emmy's teacher, heard Emmy's last big sigh. The whole room heard it. Ms. Bryant saw Emmy's feet on the desk and said, "Miss Emmy Emu, please come to my desk."

Emmy knew she was in trouble, but she just didn't care very much. "What is the matter with you?" asked Miss Bryant. Her voice was sincere.

"I don't know," said Emmy. "I guess I am tired."

"Why are you tired?" asked Miss Bryant.

"I don't know," replied Emmy. "I'm just tired of school. My head hurts."

Miss Bryant replied, "Then you must go see the school nurse, Mrs. Bumblebunny. Go to her office right now and tell her about your headache."

As Emmy entered Mrs. Bumblebunny's office her face was long and sad and droopy. "Why, what's the matter with my charming Emmy?" asked Mrs. Bumblebunny as she quickly stuck a thermometer in Emmy's mouth.

"Er, mmm, nnuudd," said Emmy with the thermometer wedged under her tongue.

"You have a headache? Oh my dear. We'll fix you right up." Emmy wondered how Mrs. Bumblebunny had understood her as she was led by the plump nurse to a cot where she gratefully lay down. "Now you just tell me all about it," said Mrs. Bumblebunny.

Emmy burst into tears. "I'm not happy," she cried. "I am so tired of trying to see the blackboard. Even with my monocular, I still can't find anything. Mrs. Bryant keeps moving things around. One day the homework assignment is on the left blackboard and the next day it may be on the right blackboard, or not written down at all," Emmy wept loudly. "I'm just not happy."

Mrs. Bumblebunny squeezed her lips into a little circle and touched the side of her head as she was in deep thought. "Emmy, there is a word for what is wrong with you. It's called frustration. Emmy you are frustrated." Mrs. Bumblebunny seemed very certain.

"Well I don't like this frustration," said Emmy. "I want it to be over."

"I have good news," said Mrs. Bumblebunny. "You can make it go away."

"Really?" asked Emmy with a surprised face.

"Yes indeed. Here is how you make it go away. You march yourself right back into that classroom and you tell Mrs. Bryant that you want to talk to her at recess. Then when you meet with her at recess, you tell her you are frustrated because she keeps moving information around on the blackboards. Tell her how difficult it is for you to find the information. Ask her to decide on an area for all homework assignments and another area for announcements, and a different area for doing math on the blackboards. Then tell her it would help you a whole bunch if she would keep those things in the same spots day after day."

"But she's the teacher. I can't tell her what to do," whined Emmy.

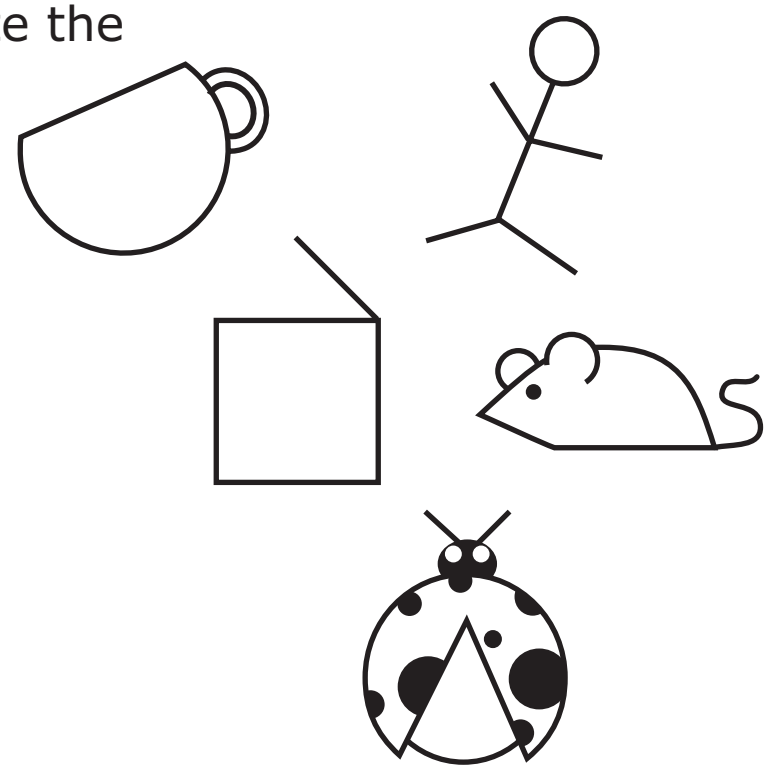
"Indeed you may not tell her what to do. But what I am saying is that you tell her what you need and ask her if she can help you get what you need. If you do it that way, I am sure she will be very helpful."

Emmy was a little scared, but she met with Miss Bryant at recess. Miss Bryant was very understanding, and she was slightly embarrassed that she hadn't thought of the solution herself. She listened to Emmy's needs and worked with Emmy to make sure Emmy did not get so frustrated

in her class again. "Emmy," she said, "I'm glad you came to me with your problem. You were good at speaking up for yourself. I'm very proud of you. I will be happy to start putting things in the same place day after day, so you can find them. Thanks for trusting me to help you with your frustrating problem."

Emmy was very glad she had followed Mrs. Bumblebunny's advice and had spoken up for herself. Suddenly her frustration was all gone. She felt happy again.

Talk to the student about speaking up when he has needs. Help him identify some of his needs. Practice with him to clearly state the need. Help him follow-up by identifying the appropriate person to ask for help in getting the need filled.



Lesson 1.11

Working in the Classroom

Objective:
The student will apply monocular skills in the regular classroom.

Materials:

Monocular, as recommended by a low vision clinician

Procedures:

1. Ask the student to use the monocular to scan the blackboard in order to locate and copy his homework assignments in his notebook or daily planner.
2. Ask the student to use the monocular to locate blackboard listings of materials to be covered each day in class.
3. Ask the student to follow along as the regular classroom teacher writes on the board.
4. Ask the student to use the monocular to copy teacher's notes from the board into his own notebook.
5. Ask the student to keep a log for a week, writing down the occasions on which he uses a monocular.
6. Make sure the student feels comfortable enough to ask for assistance if necessary.

Repeat this activity every day for five consecutive days. Reward the student.

Safety Issues for Outdoor Activities

1. The following activities should take place primarily out of doors. If you stay in a sheltered environment, such as the school grounds or the student's yard, you may be able to help the student. However, any activity which requires crossing streets or off-campus travel, the student should work with the certified O & M specialist. Before attempting to cross streets, be sure the student is quick and proficient in using the monocular to read traffic signs and signals. While the student is standing at the intersection, he should use the monocular to read the traffic signals and determine when it is appropriate to cross the street. The student should then quickly check again without the monocular to be sure that it is safe to cross.
2. The student should never walk or attempt to cross a street while using the monocular. **The monocular distorts distances and perspective because it makes things look closer and restricts field.**


Emu County
Emuville
Public Library
STOP
H
SCHOOL
Emuville
City Hall
EMU
ELEMENTARY
EMUVILLE
MIDDLE and
HIGH SCHOOL
SCHOOL
SCHOOL

Chapter II

Envision I:
Outdoor Skills

Vision Enhancement Program
Using Distance Devices

For Students 10 and Younger

Lesson 2.1

Finding Targets at Varied Distances

Objective:
Student will focus on and describe small stationary targets at various distances.

Material:

Monoculars, as recommended by a low vision clinician for outdoor use

Procedures:
Note: *A certified O & M specialist should accompany you on outdoor lessons if street crossing or off-campus travel is involved.*

1. Begin working at a distance that is comfortable for the teacher to read details of signs or objects with the naked eye. Take an assortment of cards from the Materials Tote outside. Hold them up while the student identifies them from distances of 15–30 feet. This exercise will help get the student ready to view things in the environment.
2. Ask the student to locate a specific target such as a car in the school parking lot. Ask the student to "Find the blue car in the first row."
3. Ask the student to use the monocular to identify colors and attributes of other cars he sees. Ask the student to read license plates to you. Make sure the telescope is strong enough for the small target and greater distances.

4. If the student is unable to read with the monocular telescope the license numbers that you or his fellow classmates who have typical vision can read, allow the student to try refocusing. You may want to check to see if he is spotting the car appropriately before bringing the monocular to his eye. If all these factors seem to be right and he still is not able to identify the car or the license plate, you might check to see if the monocular is focused, or that it is the appropriate telescope for the distance.
5. Ask the student to read cards from the Materials Tote, and signs and license numbers of various sizes and at various distances. You or a student may hold them for him. Make sure to hold them still and at a constant height.

Enrichment Exercise: Take a trip outside on the school grounds or to the school's conservatory, greenhouse, or flower display. Allow the student to take his time while using the monocular to identify the various trees or flowers and their colors. Ask the student to identify various leaf shapes and canopy shapes. You can use words such as "umbrella-shaped, cup-shaped, weeping, grass-like," to describe leaves and branches. You can use words such as "dangling, flat, cup-shaped, spiky" to describe flowers and leaves. When the student returns, ask him to build a replica of one of the trees or bushes out of clay, paper mache', or some other sculpting material. You may want to make it an activity for the entire class.

Lesson 2.2

Reading Signs

Objective:
Student will read signs and traffic signals off-campus at various distances.

Materials:
- Monocular, as recommended by a low vision clinician
- Street sign cards and number cards from Materials Tote

Procedures:
Note: *Please engage the services of a certified O & M specialist if performing exercises 2–7 outdoors. Simulations of Exercise 2–7 may be done on campus or indoors using object cards, number and street sign cards from the Materials Tote.*

1. Go outside with your student. Take the street sign cards and number cards from the Materials Tote. Ask the student to stand about 30 feet away and read the signs with his monocular as you hold them up. You may increase or decrease distance as needed. Continue through the cards until your student correctly identifies them all. (You may like to use a walkie-talkie to allow you and your student to communicate easily from a distance.)

2. Travel to a street corner near your school. About 30 to 40 feet from the corner, ask the student to use his monocular to "find the pole on the corner." Ask him to read the street name at the top of the pole. Work at a distance that is close enough for the student to read the sign easily. Urge him to locate the sign first, before using the monocular, by listening for intersection traffic or by looking for a patch of red that is a stop sign or a patch of green that is a street sign.
3. Ask the student to locate the traffic signal. Ask him to tell you what color the light is or to read the stop sign or other sign which may be there.
4. Ask the student to use the monocular to look at the traffic signal and tell you when the traffic signal changes. Ask him to identify whether the signal is changing from "stop" to "go" or from "go" to "caution" (yellow.)
5. Practice until the student can quickly and easily locate and read street signs, bus stop signs, and tell when traffic signals are changing.
6. In a residential area, ask the student to use the monocular to spot a house. Say to the student, "Can you read the house number?"
7. On a safe street, ask the student to locate particular house numbers using his monocular. Alternate between even and odd numbers so that the student can practice finding nearby homes. (There is no need to cross streets during this exercise.)

8. (Infinity) Show your student that as he looks at objects that are farther and farther away, little, if any, adjustment of the focusing ring is needed.

Enrichment Activity: Using Legos®, Lincoln Logs®, blocks or other children's building materials, ask the student to build "Emmy's Neighborhood" with several little houses and a street down the middle. Ask the student to cut up some paper to make street signs and addresses to put on the streets and houses. If needed, assist the student to make sure the even-numbered houses are on one side, the odd-numbered on the other. Make sure the numbers are in descending or ascending order as well. You may want to take the time to talk about the four directions, North, South, East and West. Make little birds out of paper to represent Emmy, Ethan, Ernest, Kris and Sarah and place them near their houses.

Lesson 2.3

Finding Moving Targets

Objective:
Student will scan for and describe moving targets.

Materials:

Monocular, as recommended by a low vision clinician

Procedures:
(Preparation Activity) Sit at a table with the Emmy puppet on your hand. Hold a monocular to Emmy's eye. Using toy cars, trucks and busses, ask the student to move the cars and trucks parallel or perpendicular to you. If he does not understand, show him by moving his arms in the direction you want him to move the objects. Now have Emmy watch the cars and trucks as the student moves them in the direction specified. Allow the puppet to describe the cars and trucks to the student as they approach. If the cars and trucks have license plates, have Emmy read them aloud as the vehicles move past and away from her.

Note: *Please engage the services of a certified O & M specialist when performing exercises 3 & 4.*

1. From a stationary position indoors or on the sidewalk near the school's driveway, situate yourself and your student so you can see cars as

they approach and then as they move away. Ask your student to locate the cars visually as they come near and track them with the telescope as they move farther away from him. This will take some practice. Ask him to describe the cars as they move away from him.

2. When your student can do the previous exercise smoothly, ask him to track the movement of the cars as they move toward him. Then ask him to identify the make, model, or license number of the car as it moves away from him. (If the cars are moving fast, the student may not be able to focus quickly enough to see cars as they move toward him. Skip this exercise until the student gains some experience with focusing near and far.)

3. When the student can easily find and read license numbers, ask the student to read the destination sign on a bus as the bus is moving toward him. This will require practice on spotting and focusing quickly.

4. At an intersection, ask the student to track for a short distance and describe traffic moving parallel to him. After a while, ask him to describe traffic moving perpendicular to his position. If he does not understand the concepts of perpendicular and parallel, just take his arm and move it in the direction that corresponds to the movement of the traffic you want him to watch. Make sure you use the words "perpendicular" and "parallel" so that he may soon make the association of the words and their meaning. If needed, use two pencils to demonstrate and reinforce the difference between perpendicular and parallel.

ENRICHMENT EXERCISE: Ask your student to paint a watercolor picture of a car or make one out of clay or paper mache'. Ask him to make sure the brand of car is identifiable and that the license plate is readable. Help the student create an intersection on his desk or on the floor. Ask the student to make his car move in parallel and perpendicular directions. Reward him for a good performance.

Lesson 2.4

Shopping with a Monocular

Objective:
Student will apply skills using a monocular to do shopping tasks.

Material:
- Monocular, as recommended by a low vision clinician
- Classroom, set up as mini-mall with student merchants

Procedures:
Numbers 1-7 apply to classroom mini-mall shopping.

1. Set up your classroom to be a mini-mall with everything marked by high-contrast signs. Be sure to include signs for restrooms, exit, elevator, and other signs common in malls. The students' desks can be shops; the students may have wares to sell, such as artwork, stories on tape, handmade books, or school supplies. The classroom door can be the elevator, and the teacher's desk can be the station for the mall directory.
2. Explain to the student that the mall directory is generally located near the entrance of the mall.

3. Help the student locate with the monocular the mall directory on the teacher's desk.
4. Describe to the student how the mall is situated and how to use the mall directory.
5. If appropriate, show the student where the elevators, escalators, or steps are located. Ask the student to locate each of these using the monocular.
6. Show the student where the exit signs and rest room signs are. Ask the student to locate each of these signs using the monocular.
7. Ask the student to scan a group of stores along a row in the room and read the signs out loud.
8. Ask the student to identify the individual store in which he wants to make a purchase. Allow the children to use play money to make purchases. This activity can be coupled with a math or social studies lesson.
9. Ask the student to quickly scan the store from left to right to see if the desired merchandise is there. Once the desired objects are located, show the student where to look to locate the cashier.
10. Either you or the student-store proprietor may assist the student in picking out his purchase, if needed. Ask the student to use the monocular to search for the correct store for his next purchase.
11. Read "Emmy Goes Shopping" to your student.

ENVISION I

Emmy Goes Shopping

by Elaine Kitchel

Emmy yawned and flopped over in bed. The sun coming through the shutters felt so good as it warmed her toes. Emmy wiggled her toes and counted them to make sure they were all there. She thought about breakfast. Pancakes? Hash browns? Cereal? What sounds good?

Suddenly Emmy sat straight up in bed. She completely forgot about breakfast as she remembered that today she and her friends, Sarah and Maggie, were going shopping at the mall. What would she wear?

Emmy was shuffling through all the clothes in her closet when she heard her mother call, "Emmy, you'd better get up. We'll be leaving soon." Emmy put on her orange hat with a big daisy.

It wasn't long before Emmy, Maggie, Sarah, and Maggie's mother, Mrs. Quill, were pulling into the parking lot at the Emuville mall. Mrs. Quill locked the car and turned to tell them to stay together, but Emmy, Maggie and Sarah were already scampering toward the mall entrance.

Once inside Emmy was completely lost. The mall was a blare of bright lights, noise, and people rushing to and fro. Emmy's head was spinning. She could not tell where she was or who was near. She could not locate Sarah or Maggie's voices.

"Emmy?" she heard Mrs. Quill's comforting voice call, and she turned toward it.

"Yes, Mrs. Quill."

"Emmy, let me show you the mall directory. See, here is where you are," she said as she pointed to the big yellow "X" on the directory.

Emmy pulled her magnifier from her purse and looked at the mall directory. She could see that the mall branched out in three different directions and that she was at the point where all of them joined.

Maggie and Sarah piped-up. "We want to go to the toy store! Let's find the toy store on the map." Soon they had located the toy store on the directory map and set out to find it. Emmy held Sarah's elbow tightly as Sarah led her through the maze of people. They stopped for a moment to catch their breaths, and Emmy took the chance to look at the store signs with her monocular. She could see "Toodle Toy Store" straight ahead. She walked toward the store with confidence, knowing exactly where it was now.

Sarah needed a new soccer ball, and inside they clustered around the soccer balls, trying to find the best one. Emmy felt a familiar touch on her shoulder. She turned to find Kris staring right at her.

"What are you doing here?" she asked Kris.

"Oh, I'm looking for a birthday present for my brother, Chip," said Kris. "He wants a model Demon Truck like Mean Gene's."

"Well, let me help you find one," said Emmy. She pulled out her monocular and looked at the signs above each aisle. She read, "Aisle one, dolls; aisle two, art supplies; aisle three, models!"

Emmy and Kris ran to aisle three and there they found a huge box containing a model of a Demon Truck. They read the label with their magnifiers. Kris and Emmy were very pleased that they had been able to use their monoculars and magnifiers to find a birthday present for Chip. It felt good to be able to find things just like everyone else.

Enrichment Activity: After your student has visited the classroom mall, give him the medium of his choice with which to draw, paint or construct a map of the mall. If the whole mall is not familiar to the student, have him focus on the part he visited. Make sure he includes any stairs, escalators, restrooms, or mall directories he may have encountered in his trip. Have him also indicate on his map the stores he visited.

Lesson 2.5

Having Fun with Monoculars

Objective:
Student will use a monocular for leisure activities.

Materials:
- Monocular, as recommended by a low vision clinician
- Walkie-talkies (optional)

Procedures:
Note: *If you are not a certified O & M specialist, please engage one to accompany you on these activity trips.*

Important: You are encouraged to use walkie-talkies in these exercises so that the student can participate with his friends and still maintain communication with his teacher. The unique communication provided by the walkie-talkies also prevents the student from becoming lost as he explores the environment independently.

1. **Bowling:**
   - Ask your student to keep his monocular handy, on a lanyard or chain around his neck, if desired. Assist your student in locating the alley and pins with the monocular. After your student rolls the ball, ask him to quickly grab his monocular with the opposite hand and track the

ball down the alley and watch as the ball strikes the pins. This exercise assumes the student is wearing the monocular on a lanyard around his neck.

- Show the student how to keep score.

2. **Fast food establishments:**
   - Point out to the student where the overhead menus are and how they are usually arranged in categories.
   - Ask the student to use the monocular, find a category, and read several items and prices in that category.
   - Ask the student to select a menu item from the category for his reward snack.

3. **Airport:**
   - Show the student the screens with the airline schedules arranged on them. Show him how the schedules are arranged into arrivals and departures.
   - Ask the student to check the departure time and gate for a specific flight, hopefully one which is not too far from where you are standing.
   - Show the student where the gate signs are, and, if it is not too far away, ask him to locate the gate from which the departure will take place.

- Ask the student to scan and find other important signs such as rest rooms, exits, other gates.

4. **Zoo (Enclosed Space):**
   - If the area is an enclosed space, ask the student to scan the area from left to right and to find an animal. (You may need to help the student initially in locating the animal.)
   - Ask the student to use the monocular to watch the animal and describe what it is doing.

5. **Zoo (Open Space):**
   - If the animal is in an open area, such as a large pasture or field, tell the student to find the far side of the field, that is, the horizon line.
   - Tell the student to use the horizon as a guide and to keep the horizon line in the upper portion of his view. Ask him to scan horizontally left to right, then down, and back again horizontally right to left.
   - Ask the student to describe what he sees.

6. **Concerts:**
   - Ask the student to trace the rows in the orchestra or band, left to right, front to back.
   - Point out to the student the various instruments and sections.

- Ask the student to watch the director or bandleader and follow when he points to a particular section or soloist. Explain to the student that when the director points to a section, that section plays.
- Ask the student to see if he can use the telescope to find the section that is playing and then watch individual players in that section.

7. **Sports Stadium (baseball, football, basketball, track, soccer, tennis):**
   - Ask the student to scan the field of play and describe the activity he sees. (Because of limited visual field, the student may have a difficult time following a fast moving activity.)
   - Ask the student to spot a particular player/ number and follow that player. Ask the student to describe what the player is doing. (This activity may require a consultation with the clinician for an appropriate telescope.)

8. **Movies, Television, Theater, Puppet Show:**
   - Make sure the student is in a relaxed sitting position. Ask him to focus his monocular on the television, movie screen, or stage.
   - Ask the student to describe to you a scene or character in the show.

9. **Scenic Views, Nature, Ocean:**
   - Point out a view of particular interest.
   - Ask the student to use the telescope to locate the horizon line.
   - Tell the student to use the horizon as a guide and to keep the horizon line in the upper portion of his view. Ask him to scan horizontally left to right, then down, and back again in a familiar zigzag pattern.
   - As appropriate, with the monocular, ask the student to track and describe a boat on the water, surfers in the ocean. Ask him to scan for a rock formation, a meadow, or whatever scene is available. Allow the student to move independently to view the scene as much as he desires. Keep in touch with walkie-talkies.
   - Encourage independent use of the monocular for viewing things of interest by the student. Encourage the student to view scenery, spectator sports, concerts, plays, and puppet shows with his friends. His friends may want to interact with him by using walkie-talkies. This adds interest to activities and allows your student to have an experience which is similar to that of his peers.

   When your student has completed this course, give him a certificate of accomplishment, included in your Materials Tote. Include parents and friends in his award ceremony.

Lesson 2.6 (Teacher Only)

Reporting Back to the Clinician

Objective:
To provide the clinician with the results of training with the monocular telescopes.

Materials:

Form "Using Prescriptively Recommended Optical Devices"

The clinician who provided the prescriptive recommendation of the optical devices for your student is very interested in knowing the results of the training you have provided. Only by having access to feedback from you will she be able to make an informed final prescription.

The form, "Using Prescriptively Recommended Optical Devices," (next page) is provided so that you may have a quick and handy way to report back to the clinician the proficiency your student has achieved as a result of training. For best results, fill out the form and send it in to the clinician with as much information as you can provide, including the distance at which the student performed the skill. Be sure to include information not asked for on the form, if you think it important to the clinician's final recommendation. Extra forms are provided in the Materials Packet.

Upon receipt of the form, the clinician will make a final prescription using the information you have provided. For this reason, your information must be clear, concise, and accurate. The student will be the beneficiary of your accuracy by having the best distance devices possible for his access to visual information in his world.

The American Printing House for the Blind thanks you for your devotion to your student by providing excellent training and for using ENVISION I: Vision Enhancement Program Using Distance Devices.

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FOR THE BLIND, INC.

ENVISION I

Using Prescriptively Recommended Optical Devices Skill Performance Checklist for Monocular Telescopes

After training, fill out this form and send to clinician

Student Name _____ Date _____

Optical Device _____

Teacher's Name _____ Signature _____

BASIC KNOWLEDGE	CAN DO	NEEDS ASSISTANCE	DOESN'T DO	NOTATIONS & DISTANCES
Identification				
Ocular Lens				
Objective Lens				
Barrel				
Adjustment Ring				
Lanyard				
Cleaning				
Storage				
Retrieval				
Readiness				
Identify Dominant Eye				
Choice of Hand				
Grip				
Positioning on Face				
Stabilization				

Prescriptively Recommended Optical Devices continued

BASIC KNOWLEDGE	CAN DO	NEEDS ASSISTANCE	DOESN'T DO	NOTATIONS & DISTANCES
Localization without Telescope				
Spotting				
Scanning				
Concepts				
In Focus				
Out-of-Focus				
Multiple Planes				
Infinity				
Spotting				
Without Telescope				
With Telescope				
Uses Auditory Cues				
Using Focus				
Under 20 feet				
Over 20 feet				
Single Plane				
Multiple Planes				
Tracing				
Left-to-Right				
Short Lines				
Long Lines				
Wavy Lines				
Convoluted Lines				

Prescriptively Recommended Optical Devices continued

BASIC KNOWLEDGE	CAN DO	NEEDS ASSISTANCE	DOESN'T DO	NOTATIONS & DISTANCES
Scanning Left-to-Right				
Uses Zigzag Technique				
Identification Symbols				
Pictures				
Numbers				
Street Signs				
Words on Chalkboard				
People				
Objects				
Tracking Moving People				
Moving Objects				
Single Plane				
Multiple Planes				
Leisure Use Television				
Outdoor Events				
Indoor Events				
Movies				
Independent Use Frequently				
Infrequently				
Never				

Length of Training Time _____ Comments _____

Curriculum Used _____ _____

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Eauville Zoo
STOP

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