

ENVISION II

Vision Enhancement Program Using Near Magnification Devices

Students 11 and Older

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, getting a 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 it easier to develop this positive working relationship. 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 for the TVI a clinical low vision report 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 for 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 II

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.

Today, many strategies exist 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 in the use of each.



Low vision devices such as variable-distance and fixed-distance magnifiers are the best recognized tools used by persons with low vision who wish to function expertly and confidently in an environment where near distance vision is important. Because

magnifiers are available in a range of styles and powers, expert advice is needed to determine the correct magnifier for each student. The low vision clinician fills this need by administering a low vision exam to each student for whom it is appropriate.

Under the best of circumstances, the low vision exam occurs 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 far from his face does the student hold his reading materials?” Basing her decision on the functional vision evaluation and the clinical exam, the clinician then prescribes, according to need, one or more magnifiers for the student, or he may determine no devices are needed.

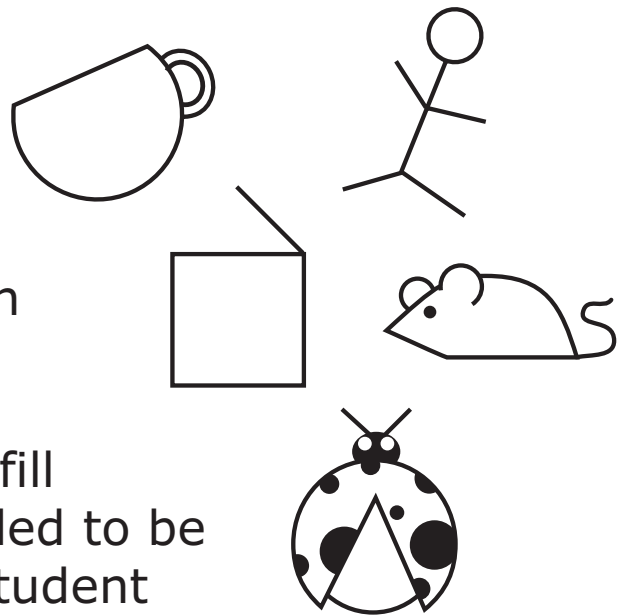
“...an examination by the low vision clinician is necessary BEFORE implementation of Envision curricula and associated materials.”

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, she will

find it easy to match the student with the correct magnifier from the array. The array is provided for use during training if the student did not receive a

magnifier immediately after his examination. The teacher must use the magnifier of the same power as the one recommended by the clinician unless the clinician specifies otherwise. In addition, the teacher should loan the magnifier 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 magnifier is only the beginning of access to the environment by the student with visual impairments, each ENVISION II curriculum 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 near magnification device, or immediately upon the student's 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 magnifier while he is still enthusiastic about receiving the devices.



Once the student receives the recommended magnifier 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 low vision clinician by the time that 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 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.

“It is very important 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 device.”

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 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 is a little easier because a dialogue with the clinician has already been opened.

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

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 magnifier to a student, it is important the teacher understand the child and the way his vision functions. The creators of ENVISION II: Vision Enhancement Program Using Near Magnification Devices have included a "Student Information Sheet," which may be photocopied and

completed with help from the student's parents 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 low vision 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 magnifiers can work equally well with every child, ENVISION II: Vision Enhancement Program Using Near Magnification Devices 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 magnifiers. Additionally, skills learned through the use of near magnification devices should reinforce visual attending, visual examining, and visually-guided motor behaviors (Hall and Bailey, 1989). Therefore, these curricula include suggested high-interest activities and stories that help develop the aforementioned skills. The curricula also suggest methods for reinforcement of skills as they develop. Furthermore, as stated in the introduction, various levels

of acuity can be involved in the training programs by the manipulation of the training

“It is essential that the lessons used in training the student be relevant to the student’s life and experience.”

devices and the print or object sizes. However, if the largest of the printed exercises is not adequate, the teacher should consult with the clinician about increasing the magnifying power of the prescribed device.

It is essential that the lessons 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.

The ENVISION II curricula includes two fixed-distance, dome magnifiers; two fixed-distance, stand magnifiers; and two variable-distance, hand-held magnifiers.

The fixed-distance, dome magnifiers are referred to as such because the devices lie flat on the page and are curved along the top like a dome. Dome magnifiers are a favorite reading tool for many students because they are easy to use. Since the devices rest directly on the page, students need not worry about maintaining the correct focal distance, as is the case with variable-distance, hand-held magnifiers. Moreover, because the devices are constructed almost entirely of glass, they concentrate available light, effectively illuminating the reading material. Similar to dome magnifiers are fixed-distance, stand magnifiers, which also are set directly upon the reading material.

APH has also included in ENVISION II variable-distance, hand-held magnifiers because there are several advantages to magnifiers of this type. They are relatively inexpensive and come in a variety of strengths and styles. For the most part, they are easy to obtain and carry, may be used successfully with other corrective lenses, and can be used discreetly. Many of them are extremely durable; and because

they aren't placed directly on what is to be magnified, students can easily use them to magnify "fun" objects such as insects, flowers, fingers, animal fur, or whatever objects students find interesting.

At first, students may struggle with a variable-distance, hand-held magnifier's small field. Students might also fatigue quickly as a result of laboring to preserve correct focal distance. An APH GrandStand or some other reading stand is especially beneficial to an untrained student because such a device helps alleviate fatigue by enhancing postural comfort, thereby making the proper focal distance easier to maintain. When a reading stand is used, it should be adjusted so the student can read from the top of the page to the bottom without straining the back, neck, and arms. In

some cases, a small cushion or gel wrist support also helps prevent

"Dome magnifiers are a favorite reading tool for many students because they are easy to use."

arm fatigue. Because effective use of variable-distance, hand-held magnifiers requires a certain degree of synchronization among the eyes, hands, and head, they are not recommended for students with poor eye-hand coordination. Regardless of what style of magnifier the student is using, if he complains of fatigue, the teacher should be sensitive to his needs and allow his entire visual system to relax and feel restored before continuing the exercises.

The importance of keeping magnifiers clean and free of scratches cannot be overstated. Dirty or scuffed lenses can severely hinder a student's view. Most magnifiers can be cleaned adequately by blowing off the larger dust particles and wiping the lenses with a clean, soft cotton cloth or optical tissue. The teacher and student should avoid using paper towels or regular tissue, as they contain tiny wooden fibers that can scratch the lens. On some magnifiers, mild, film-free soap and water may be used to remove stubborn smudges. For best results, the teacher and student should always check the manufacturer's cleaning suggestions if such literature is included with the magnifier.

The importance of maintaining proper working condition of the magnifier is but one reason for the specific instructions within the curricula regarding the suggested steps a student should perform to find the most common starting point (usually the top left) on a page of reading material. The ENVISION II curricula direct the student to place the magnifier near the bottom middle of the page and scan straight up to the top of the page and then over to the top left corner. "Why not just have the student begin at the top left?" one might ask. First, the procedure described above helps protect the magnifier. If the student systematically scans from the bottom of the page to the top left, the possibility of the magnifier being

damaged is lessened because the magnifier remains upon a smooth, safe reading surface during the search. Conversely, if an inexperienced student tries to find a starting point directly, without an orderly approach, he might repeatedly set the magnifier down and scoot it along, not upon the reading material, but on a desktop, floor, or some other surface capable of damaging the lens. Second, the suggested approach helps orient the student to the height and width of the page and provides an extra opportunity for the student to see what is on the page, even before he scans specifically for content orientation.



MAGNIFICATION POWER AND FOCAL DISTANCE

- The magnification power of a magnifier is usually labeled in “x” notations, e.g., 1.8x, 4x, 6x. One convention used in arriving at this power designation is to divide the dioptric power of the lens by the number 4. Using this convention, a 32-diopter lens, for example, would be said to magnify an object eight times (8x). However, not all manufacturers use the same labeling convention, so a 4x magnifier from one company is not necessarily the same as a 4x magnifier from a different manufacturer.
- Another measurement worth noting is the magnifier’s *focal distance*, which is the distance between the magnifier’s lens and the object being viewed. This is different than the *working distance*, which, in this text, is defined as the distance between the eye of the user and the lens of the magnifier. To use a variable-distance, hand-held magnifier effectively, the student must hold it at the correct focal distance.
- It is also helpful to remember that as the working distance increases, the field of view through the magnifier decreases. Conversely, when the correct focal distance is held constant and the working distance decreases, the field of view increases and distortion of the object being viewed

decreases. Thus, as the power of the magnifier increases, the student will find it necessary to hold the magnifier closer to the eye in order to maintain a workable field of view.

- Procedures for finding and maintaining *focal distance* will be introduced in the exercises designed for use with variable-distance, hand-held magnifiers.

When introducing students to near magnification devices, the teacher must ensure that the environment be well suited for reading. Each student is unique and has preferences regarding illumination and reading position, though there is some general information that will make preparing a good learning environment easier.

- When possible, the blue-white or cool-white fluorescent tubes commonly found in overhead fixtures should be replaced with pink or warm white fluorescent tubes. This reduces glare.
- Any lamps should contain 75 to 100 watt soft white, pink, or peach bulbs and be shaded to diffuse light and inhibit glare. Flexible-neck lamps are preferred, as are lamps controlled by dimmers or rheostats.
- To ensure the light shines away from the student's eyes and onto the reading materials, the lighting source should be positioned near the shoulder on the same side of the body as the eye being used.

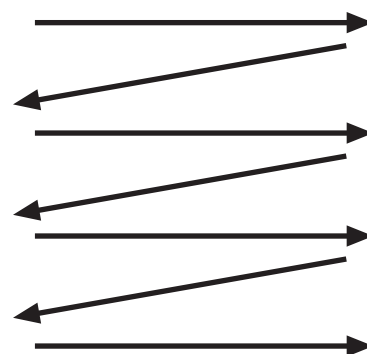
- To avoid shadows during writing exercises, the teacher should position the light source to the front of the writing materials, opposite the student's writing hand.
- For best results, the teacher should instruct the student to perform some short reading tasks under various intensities of both incandescent and fluorescent light to determine under which light the student reads best and/or is most comfortable.
- Chairs, tables, and reading stands should be positioned so the student can bring the materials within focal distance and read comfortably, without straining his back, neck, and arms.
- Items that might distract the visual attention of the student should be kept to a minimum, and reading surfaces should be as glare-free as possible.
- Ultimately, all exercises should be positive experiences that build confidence and sustain your student's motivation.

Other concerns, especially among teens, include psychosocial factors involved in 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 their magnifier 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 magnifier. Including the student's classmates in activities and discussions that make instruction and activities in optics look attractive can also help other students warm to a student who uses a magnifier. Such activities might include stamp and coin collecting, the study of biology and chemistry, and discussions regarding professions in which magnification devices play an important role, such as watchmaker, archeologist, and Indy car builder.

Ultimately, the teacher should enjoy her partnership with the student during the training experience. Seeing a student successfully tackle the academic demands of school because he has access to needed visual information is one of the most rewarding experiences a teacher can have.

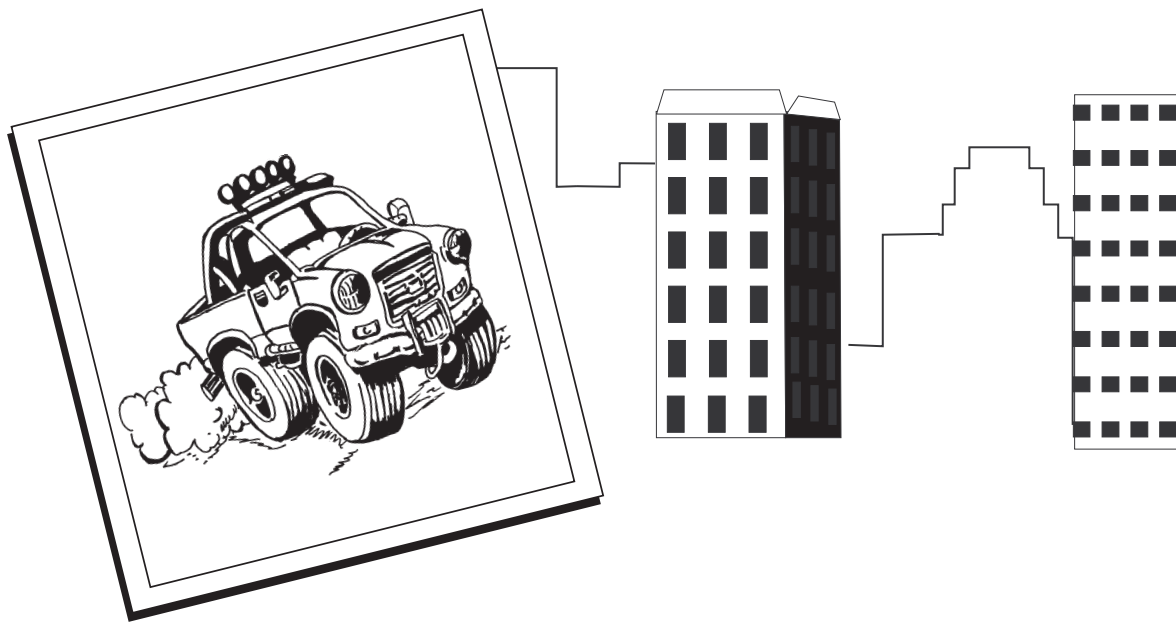
COMMON TERMS & DEFINITIONS

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. **Magnifier:** An optical device that is usually prescribed by a low vision clinician and which relies on a lens or lenses to increase the size of an image.
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 in real space.
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 often affiliated with the training of distance devices, it denotes the visual following of stationary lines in the environment.
7. **Visual Field (Field of Vision):** Measured in degrees from the fixation point, it represents what a person sees centrally and peripherally when looking straight ahead.
8. **Dominant Eye:** The eye that naturally sends more visual information to the brain. Often, but not always, the dominant eye will be 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 near magnification devices. However, it is best to check with the low vision clinician to confirm which eye should be used with a prescribed device.
9. **Dominant Arm:** The arm with which one naturally performs most physical tasks. Unless your student's dominant arm is damaged, he should find it easiest to use the hand of his dominant arm to manipulate the magnifier.

10. **Scotoma:** A “blind spot” in the visual field, frequently caused by damage to the retina.
11. **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 ineffective.



Skills and Topics Presented in Envision II

Students 11 and Older

Skill	Where Found
Basics:	
Cleaning	Preparation; Lessons 1.1, 1.5, 2.1, 2.5, 3.1, 3.5
Storage	Lessons 1.1, 2.1, 3.1
Retrieval	Lessons 1.1-1.6, 2.1- 2.7, 3.1-3.7
Set-up:	
Materials position	Preparation; Lessons 1.1-1.6, 2.1- 2.6, 3.1- 3.6
Use of reading stand	Preparation; Lessons 3.2, 3.5, 3.6
Task lighting	Preparation
Selected visual field/eye	Terms and Definitions
Hand selection	Terms and Definitions
Grip	Lessons 1.1-1.6, 2.1-2.6, 3.1-3.6
Stabilization of hand and materials	Preparation; Lessons 3.2, 3.3

Skill	Where Found
Reading Concepts	
In focus	Things To Do; Lesson 1.1
Focal distance	Terms and Definitions; Lessons 3.2, 3.3, 3.6, 3.7
Working distance	Preparation; Lessons 3.2, 3.6, 3.7
Localization	Terms and Definitions; Lessons 1.2, 1.3, 1.5, 2.2, 2.5, 2.6, 3.2, 3.5, 3.6
Scanning	Terms and Definitions; Lessons 1.2-1.4, 1.6- 1.8, 2.2-2.8, 3.2, 3.3, 3.5, 3.6, 3.7, 3.8
Shifting to the next line	Lessons 1.2, 1.3, 1.6, 1.7, 1.8, 2.2, 2.3, 2.5, 2.7, 3.2, 3.3, 3.6, 3.7
Tracing	Terms and Definitions; Lessons 2.6, 3.4, 3.8
Content Interpretation	
Symbols/signs	Lessons 3.6, 3.8
Illustrations	Lessons 1.2, 1.4, 1.6, 2.2, 2.4, 2.6, 3.2
Maps	Lessons 3.4, 3.8
Text	Lessons 1.2, 1.6, 1.8, 2.2, 2.6, 2.8, 3.2, 3.4, 3.6, 3.8

USE A MAGNIFIER FOR...

1. Exploring the environment
2. Reading educational and recreational materials
3. Reading letters from friends and family
4. Reading labels on medicine, food items, and machinery
5. Viewing menus
6. Reading train and bus schedules
7. Checking travel itineraries
8. Reading song lists on CDs and audiocassettes
9. Verifying television listings and movie times
10. Reading game instructions
11. Identifying currency denominations
12. Analyzing maps
13. Examining photographs

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. What's in your student's eye report
5. 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
6. How to include near magnification device training in your student's IEP
7. The power of the magnifier recommended by the low vision clinician
8. The features and capabilities of the optical devices you will be using as tools
9. How the student performs without the device
10. If the student should be wearing prescription spectacles while using the device
11. The best lighting to use during training

THINGS TO DO BEFORE USING ENVISION

1. Ask the parents to 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 magnifier skills training.
2. Obtain and read your student's eye report.
3. Become familiar with near magnification devices 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 43.)



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

page 2

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	

CHAPTER I



FIXED-DISTANCE, DOME MAGNIFIERS

- Bright Field Paperweight
- Light Gathering Magnifier

Note: Always begin the ENVISION II curricula with the lesson specific to the magnifier prescribed to your student by the low vision clinician. For example, if your student was prescribed a variable-distance, hand-held magnifier, ensure that the student completes the chapter specific to magnifiers of that type before working through the remaining chapters.

Lesson 1.1

INTRODUCTORY EXERCISE USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will become familiar with the recommended magnifier and learn how to clean it. The instructor should allow the student time to touch the magnifier and ask questions regarding its function, construction, etc.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lens cleaning cloth

Exercise:

1. Prepare a clean, uncluttered workspace in which the student can investigate the magnifier and practice cleaning it.
2. Show your student how to remove the magnifier from its case. Explain that the magnifier should be placed only on the reading materials and should never be set upon rough and hard surfaces, which can scratch the lens. Return the magnifier to its case and emphasize the importance of storing it in the case when not in use.
3. Allow the student to remove the magnifier from its case. Show him how to handle the magnifier

without touching and smudging the lens. Usually, a suitable method for handling a dome magnifier is to use the thumb and forefinger of the dominant hand to grip it along its sides. Demonstrate to your student how he can use the magnifier to explore objects in his environment by holding the magnifier up to his eye with one hand while using his other hand to bring objects such as coins, CD cases, and maps into the focus of the magnifier. Explain that the object is “in focus” when it looks sharpest through the magnifier. If the student has not learned the concept of “in focus,” use the exercise from #5 in “Things To Do Before Using ENVISION” (p. 41).

4. Demonstrate how to clean the magnifier with the lens cleaning cloth by rubbing both sides of the lens. Explain to your student that he should use only special lens cleaning tissue or lens cleaning cloth since regular tissue and paper towels can scratch the lens. Return the magnifier to the student and let him practice using the lens cleaning cloth to rub both sides of the lens.
5. Allow your student to hold the magnifier and ask questions regarding its purpose or any other questions he has concerning the magnifier and caring for it. This time allows the student to familiarize himself with the weight, size, and shape of the device. Before moving to the next exercise, ensure that the student has had adequate time to explore the look and feel of the magnifier.

6. After the student has had time to perform an initial investigation of the magnifier, you might choose to open a dialogue with him concerning any apprehension he may have about using the device. You might start by asking the student how he feels about using the magnifier. His answer might be similar to the following: "Well, I might use the magnifier at home, but I will probably not use it as much in school." Try responding to his answer with a question such as "You must have a lot of reading to do in class. How will you get it done if you don't use the magnifier very often in class?" etc. Ideally, your goal is to dispel your student's fears by leading him to a positive conclusion regarding those scenarios he finds distressing. Students who use optical devices are often reassured when they realize that other students are usually concerned about themselves and pay little attention to who is using a magnification device.

Lesson 1.2

BASIC USE EXERCISE USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will become familiar with basic localizing and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 1.2 Basic Use Exercise Sheet

Exercise:

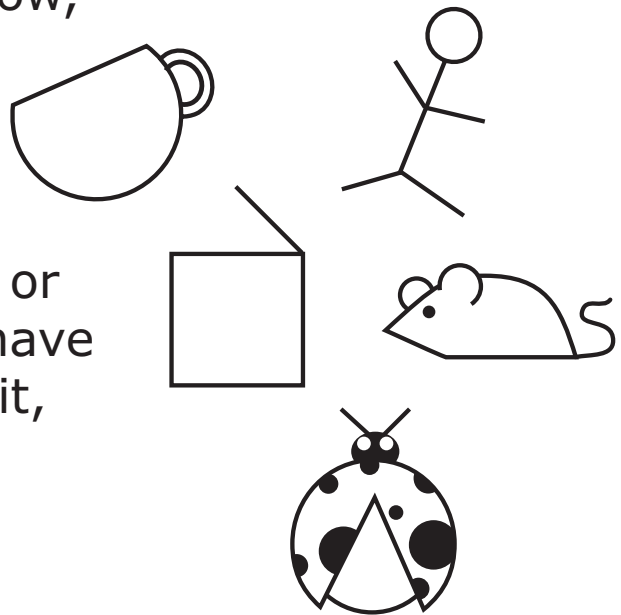
1. Prepare a clean, uncluttered workspace in which the student can undertake the following exercise.
2. Place the Basic Use Exercise Sheet for Lesson 1.2 in a position that will allow the student to scan it comfortably, without straining his back, neck, and arms.
3. Allow the student to remove the magnifier from its case. Ensure that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier along its sides. If the lens of the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Ask the student to look through the lens of the magnifier and locate the top left of the Basic Use Exercise Sheet. Tell your student that the technique of finding specific locations on a page is called “localization.” If your student has difficulty locating the top left of the page, show him how by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.
5. When your student can locate the top left of the page, show him how to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the page from top to bottom. Explain that this movement is called “scanning.”
6. After your student has familiarized himself with the layout of the page, ask him to locate the first image of the first line on the page and begin scanning from left to right the first row of objects on the page. As your student scans, ask him to describe what he sees so you can verify his responses.
7. When your student has completed scanning the first row of objects, show him how to scan back to

the left on the same row before descending to the next row to be scanned. If needed, use hand-over-hand assistance to demonstrate the technique.

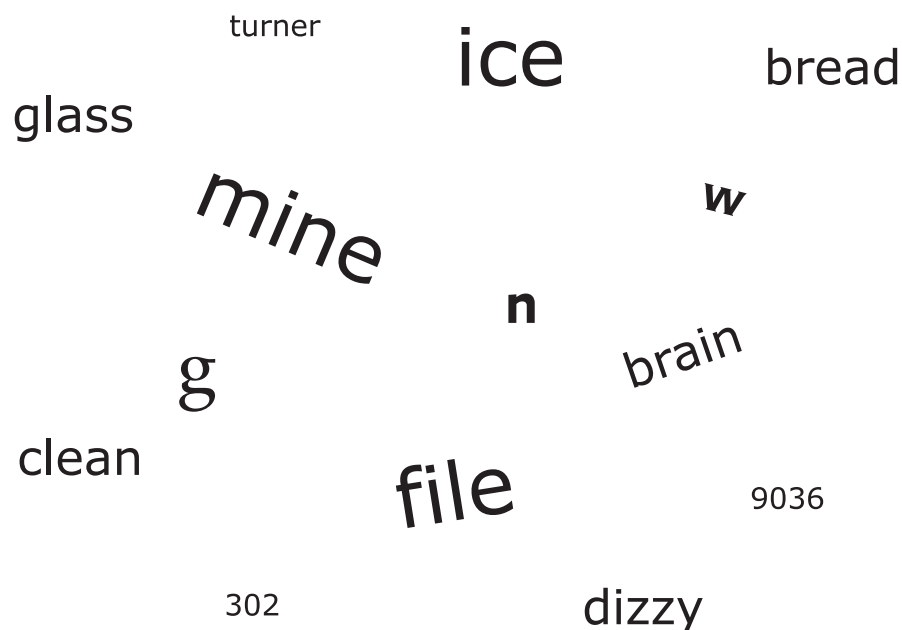
8. Encourage your student to continue scanning the rows of items. Don't forget to verify his descriptions and confirm that he is scanning back to the left on the same row before descending to the next line to be scanned. Note: Depending on the power and viewing area of the magnifier, your student might complain of simultaneously seeing two or three rows of images as he scans with his magnifier. The ENVISION II curricula were purposely designed to achieve this effect in order to train the student in maintaining concentration on the appropriate line, which should remain in the center of the magnification field.
9. As your student reads words and numbers, pay particular attention to what types of reading errors are made so appropriate adjustments can be arranged. If the student is failing to read parts of words, he may have a field loss. To deal with this possibility, make sure that the student continues scanning with the magnifier across the entire line of text and into the margin. This ensures that the student has scanned all text, and isn't just guessing at the ends of words. If "skipping" continues to be a problem, refer the student back to the low vision clinician.

10. Toward the end of the lesson, the student will encounter drawings in which several details are exhibited. Instruct your student to examine the images by using the same technique he used to orient himself with the contents of the entire page, i.e., beginning at the top of the depiction and scanning from left to right and back to the left until the bottom of the image is in view. When your student begins scanning the more detailed images, prompt him to describe some of the particulars he sees. For example, if the image depicts several birds in a tree, and your student reports that he sees "a tree," you might prompt him to look more closely at the image by asking him to find, describe, and count the objects in the tree. Ideally, after a few prompts, your student should begin to describe such details on his own.
11. If your student is unable to read the words or numbers of a particular row, ask him to try scanning the next row. If he is still unable to identify the text and complains that items look too small or blurry, the student may have reached his print size limit,



or he may be fatigued. Repeat the exercise the next day. If the same results emerge, make a note of the print size that consistently gives your student trouble and postpone the remainder of the exercise until you can speak to the student's low vision clinician about the difficulties he is experiencing.

12. When your student completes the exercise, congratulate him. If necessary, you might ask him to reread any lines of text he found difficult to interpret. However, if he seems fatigued or agitated, allow him to take a short break before trying again. Remember such a learning process should not be rushed. Moreover, each lesson should end on a positive note, with the student feeling encouraged about his progress.



Lesson 1.3

BASIC READING EXERCISE USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will use basic localizing and scanning techniques to read a story.

Materials:

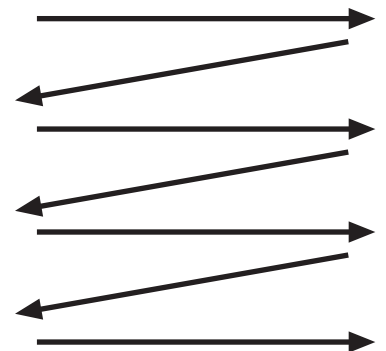
- Magnifier, as recommended by the low vision clinician
- Lesson 1.3 Basic Reading Exercise Sheets, “Emmy at the Truck Show”

Exercise:

1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following exercise.
2. Place the Lesson 1.3 Basic Reading Exercise Sheets of a point size the he regularly uses, in a position that will allow him to read without straining his back, neck, and arms.
3. Instruct the student to remove the magnifier from its case. Confirm that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier along its

sides. If the lens of the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Instruct your student to look through the lens of the magnifier and locate the top left of the first page of the Lesson 1.3 Basic Reading Exercise. Tell your student that the technique of finding specific locations on a page is called "localization." If your student has difficulty locating the top left of the page, show him how by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.
5. After your student can locate the top left of the page, instruct him to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the page from top to bottom. Remind the student that this movement is called "scanning."



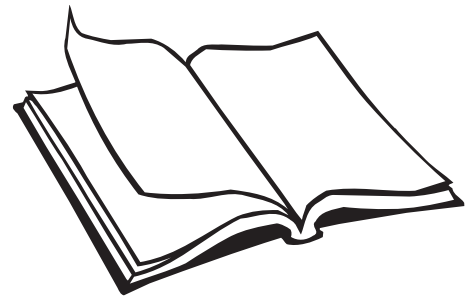
6. Instruct your student to start on the first line and read the text aloud. Verify the words he reads and observe his technique, confirming that he is scanning back to the left on the same line before descending to the next line to be read. If necessary, you may offer hand-over-hand assistance to help reinforce proper scanning techniques.
7. Encourage the student to continue reading the story. However, if he becomes tired or agitated allow him to take a short break before continuing. Moreover, if your student seems to tire easily and is unable to read the whole story without becoming discouraged, set smaller goals for him. For example, you might instruct the student to read one or two paragraphs at a time. Such a



strategy should help prevent the student from feeling overwhelmed. Notice what types of reading errors are made so any needed adjustments can be arranged. If the student

is failing to read parts of words, he may have a field loss. To deal with this possibility, make sure that the student continues scanning with the magnifier across the entire line of text and into the margin. This ensures that the student has scanned all text, and isn't just guessing at the ends of words. If "skipping" continues to be a problem, refer the student back to the low vision clinician.

8. If your student is unable to read the story in the point size chosen, allow him to try reading the story in a different point size.
9. If, after allowing your student to try reading the text in a different point size, he insists that the text still looks blurry or too small, cease the exercise and try again the next day, when the student is fresh. If the same difficulties emerge, record the smallest print size your student can read comfortably and report the information to the low vision clinician.



Lesson 1.4

ENRICHMENT EXERCISE USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will continue to develop basic localizing and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 1.4 Enrichment Exercise Sheet
- Washable crayon

Exercise:

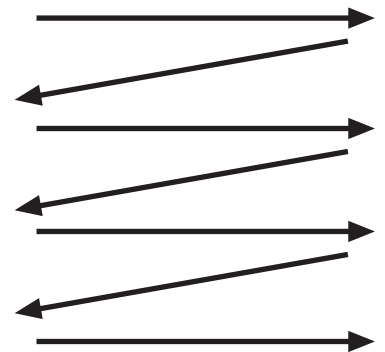
1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following exercise.
2. Ask your student to place the Enrichment Exercise Sheet for Lesson 1.4 in a position that will allow him to scan it without straining his back, neck, and arms.
3. Instruct your student to remove the magnifier from its case. Ensure that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and

forefinger of his dominant hand to grip the magnifier along its sides. If the lens of the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Instruct your student to look through the lens of the magnifier and locate the top left of the page. Tell your student that the technique of finding specific locations on a page is called “localization.” If your student has difficulty locating the top left of the page, show him how by using the following effective technique:

- Begin with the magnifier positioned near the bottom middle of the page.
- Scan straight up from the bottom middle to the top middle of the page.
- Scan left from the top middle to the top left corner of the page.

5. Instruct your student to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the page from top to bottom.



6. Now explain to your student that he is to use the magnifier and washable crayon to locate and label

certain items that are on the page. Be sure and tell him that several items are hidden or may not be where one might expect to find them.

7. Read to your student one-at-a-time the following items, and allow him adequate time to find and label the appropriate item.

Oil filter

Frog

Spring

Tennis racquet

Toys in the toolbox

Bird's nest

Spark plugs

Pecan pie

Steering wheel

Clock

Truck muffler

Lizard

8. When your student has located and labeled each of the items, congratulate him and speak with him about what he found difficult or easy about the exercise.
9. Lastly, use a tissue to remove markings from the exercise sheet.

Lesson 1.5

INTRODUCTORY REVIEW USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will review proper handling and cleaning techniques for the recommended magnifier. Allow your student ample time to ask questions concerning the magnifier and its usefulness.

Materials:

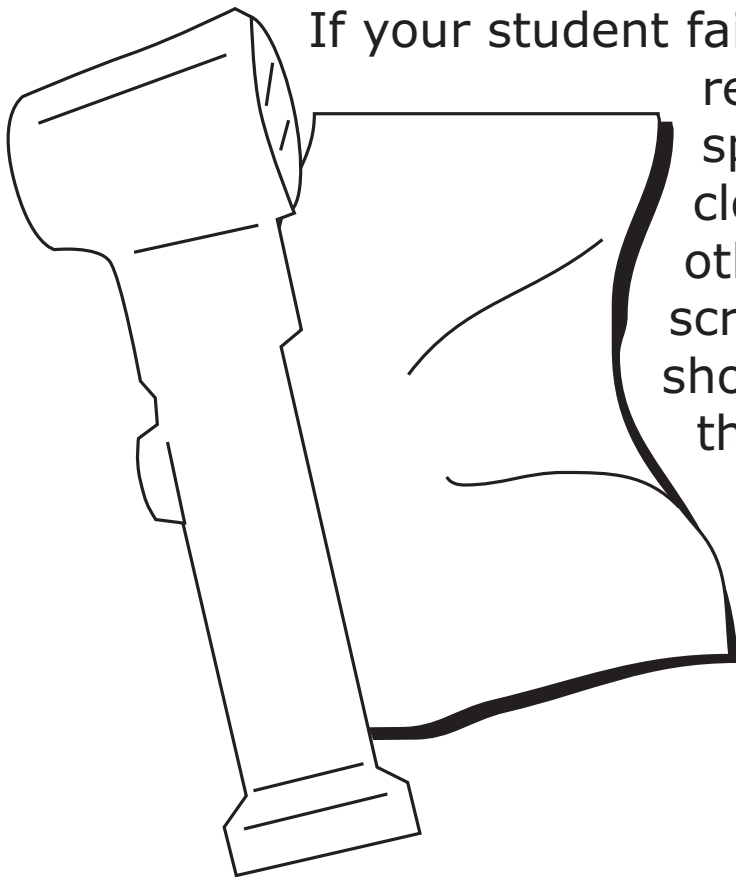
- Magnifier, as recommended by the low vision clinician
- Lens cleaning cloth

Review:

1. Ask the student to prepare a clean, uncluttered workspace in which to practice cleaning and handling the magnifier.
2. Tell your student that you would like to watch him clean his magnifier.
3. Ask your student to remove the magnifier from its case. Notice the way your student handles the magnifier. Is he holding the magnifier in a manner that will prevent the lens from being smudged? If he is not, gently remind him that the best way to avoid smudging the lens is to use the thumb and forefinger of his dominant hand to grip the magnifier along its sides.

4. Tell your student to set down the magnifier. Notice whether he remembers to place the magnifier on the reading material. If your student has forgotten the importance of keeping the magnifier away from rough surfaces, remind him that rough surfaces could harm his magnifier and that he should place the magnifier only on the reading material.
5. Ask your student to show you how to clean the magnifier. Your student should clean the magnifier by rubbing the lens with a lens cleaning cloth or lens cleaning tissue. Ask your student why he should use only lens cleaning cloth or special lens cleaning tissue to clean the magnifier.

If your student fails to tell you that the reason he should use special lens cleaning cloth or tissue is because other materials might scratch the lens, you should emphasize again that materials not



specifically designed to clean lenses can damage them. If your student has forgotten how to clean the magnifier, take the device from the student and show him how to clean it by rubbing the lens with a lens cleaning cloth. When you are finished, return the magnifier to the student and let him practice using the lens cleaning cloth to rub both sides of the lens.

6. Allow the student to hold the magnifier and ask any questions that may have occurred to him during the review.

Note: If, when you and your student begin working within the two other chapters of this curriculum, you wish to skip the Introductory Exercise Lessons, which deal with the cleaning of the magnifier, do so only if your student has mastered the proper techniques for handling and cleaning the magnifier. Otherwise, work with your student through the lessons, continuing to use the magnifier prescribed by the low vision clinician.

Lesson 1.6

BASIC USE REVIEW USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will review basic localizing and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 1.6 Basic Use Review Sheets

Review:

1. Instruct the student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Ask the student to place the Basic Use Review Sheets for Lesson 1.6 in a position that will allow him to scan them comfortably, without straining his back, neck, and arms.
3. Allow the student to remove the magnifier from its case. Is he is holding the magnifier in a manner that prevents the lens from being smudged? If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier along its sides. If the lens of the magnifier is dirty, instruct the student to clean it with a lens cleaning cloth or lens cleaning tissue.

4. Ask your student to show you the proper procedure for locating the top left of the first Basic Use Review Sheet. Remind your student that the technique of finding specific locations on a page is called “localization.” If your student has forgotten the procedure, review with him how to find the top of the page by using the following effective technique:
 - Locate the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.
5. After your student has exhibited the correct procedure for locating the top left of the review sheet, request that he demonstrate the technique for familiarizing himself with the layout of the page. If your student fails to scan the page from top to bottom using a left-to-right and back-to-left zigzag pattern, review this method with him.
6. Now tell your student that you want him to scan the first row of images on the page and describe what he sees through the magnifier. Ensure that he uses the technique described in step #4 for locating the first image to be scanned.
7. After your student has successfully scanned the first row of items, instruct him to scan the rest of the rows on the page, describing aloud what he

sees through the magnifier. As your student scans, verify his descriptions and notice whether he scans back to the left on the same row before descending to the next row to be scanned. If he fails to do this, remind him of the technique, and if needed, use hand-over-hand to demonstrate. If your student complains of simultaneously seeing two or three rows of images or text through the magnifier, remind him that the ENVISION II curricula were purposely designed to achieve this effect in order to help him practice maintaining focus on the appropriate line, which should always remain in the center of the magnification field.

8. When your student encounters images in which several details are exhibited, notice whether he remembers to orient himself with their contents by using a left-to-right and back-to-left zigzag pattern to scan the images from top to bottom. If he forgot the technique, allow him to review it and try scanning the images again.
9. On the second Basic Use Review Sheet for Lesson 1.6, your student will encounter text and images of various content, shape, and size. Notice whether he remembers to orient himself with the contents of the page. If needed, review step #5 with him.

10. When your student comprehends the layout of the page, prompt him to read the passages aloud. As your student reads, ensure that he remembers to scan back to the left on the same line of text before descending to the next line to be read. When your student examines the accompanying images, notice whether he remembers to orient himself with their contents by using a left-to-right and back-to-left zigzag pattern to scan the images from top to bottom.
11. As your student reads the text and examines the images, ensure that he maintains his dominant eye directly over the magnifier's lens, moving his head and magnifier hand together instead of trying to follow the magnifier by simply turning his head or eyes. Note: If your student can read the larger print but is unable to read one or both of the smaller print sizes, then this may be an indicator that the student may have reached his print size limit, or he may be fatigued. Repeat the exercise the next day. If the same results emerge, you may need to explain the situation to the low vision clinician and talk about the possibility of increasing the magnification power of the prescribed device.
12. When your student completes the review, congratulate him. If necessary, allow your student to take a break before working on the next review.

Lesson 1.7

BASIC READING REVIEW USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will review the basic localizing and scanning techniques that are necessary for reading a story.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 1.7 Basic Reading Review Sheets, "Emmy's Train Ride"

Review:

1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Direct the student to place the Lesson 1.7 Basic Reading Review Sheets of a point size that he regularly uses, in a position that will allow him to read without straining his back, neck, and arms.
3. Instruct the student to remove the magnifier from its case. Is he holding the magnifier in a manner that prevents the lens from being smudged? If he is not, demonstrate again how he should do so by

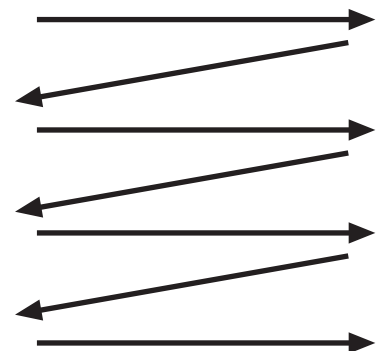
using the thumb and forefinger of his dominant hand to grip the magnifier along its sides. If the lens of the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Instruct your student to show you the correct method for locating the top left of the first page of the Lesson 1.7 Basic Reading Review. Your student should remember to locate the top left of the page by using the following effective technique:

- Begin with the magnifier positioned near the bottom middle of the page.
- Scan straight up from the bottom middle to the top middle of the page.
- Scan left from the top middle to the top left corner of the page.

If your student has forgotten the technique, review it with him using hand-over-hand if necessary. If needed, remind your student that the technique of finding specific locations on a page is called "localization."

5. After your student can locate the top left of the page, instruct him to familiarize himself with the layout of the page. Does your student observe the page layout



by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the pages from top to bottom? If not, review this method with him, using hand-over-hand technique if necessary.

6. Ask your student to locate the beginning of the story and read the text aloud. As your student reads, confirm that he is scanning the same line of text back to the left before descending to the next line to be read. Encourage your student to continue reading the story, but watch for signs of fatigue in your student. If he becomes tired or agitated, allow him to take a short break, and if needed set smaller goals for him, e.g., asking the student to read only one or two paragraphs at a time.
7. Congratulate your student when he completes the review.



Lesson 1.8

ENRICHMENT REVIEW USING A FIXED-DISTANCE, DOME MAGNIFIER

Objective:

Student will review basic localizing and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 1.8 Enrichment Review Sheets
- Washable crayon

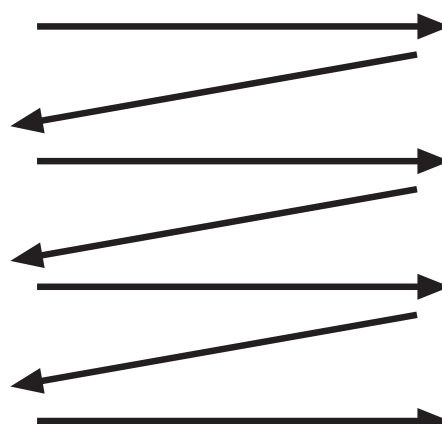
Review:

1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following review. Allow him to remove the magnifier from its case.
2. Instruct the student to place the Enrichment Review Sheets for Lesson 1.8 in a position that will allow him to scan them comfortably, without straining his back, neck, and arms.
3. Direct your student to remove the magnifier from its case. Is he holding the magnifier in a manner that prevents the lens from being smudged? If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant

hand to grip the magnifier along its sides. If the lens of the magnifier is dirty, ask the student to clean it with a lens cleaning cloth or lens cleaning tissue.

4. Tell your student that he will be using the magnifier to answer questions about Emmy's travel itinerary. Explain to your student that he is to read a question regarding Emmy's activities and then search the itinerary sheets for the correct answer. As your student works, you can use the questions and answers on the following pages to follow along.
5. Have your student use one of the Enrichment Review Sheets to demonstrate the proper method for locating the top of the page. Your student should remember to locate the top left of the page by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.

If your student has forgotten the technique, review it with him using hand-over-hand if necessary. If needed, remind your student that the technique of finding specific locations on a page is called "localization."

6. After your student has demonstrated the proper procedure for locating the top of the page, encourage him to familiarize himself with the first two Enrichment Review Pages (itinerary and questions). Ensure that your student investigates the page layouts by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the pages from top to bottom. If your student failed to demonstrate this method, review the technique with him using hand-over-hand if necessary.
- 
7. After your student has familiarized himself with the design of the pages, encourage him to read the first question and search the itinerary for the answer.
8. When your student reads the question and searches the itinerary, watch his technique. Ensure that he begins scanning on the left side of the page, and when needed, scans back to the left on the same line of text before descending to the next line to be scanned.
9. Encourage your student to continue answering the questions by using his magnifier to examine the itinerary. Remember, be patient with your student, as this is a challenging exercise. If your

student becomes tired or frustrated, don't force him to continue. Instead, allow him to take a break before continuing. You might also use hand-over-hand to help the student find a few of the answers until you are certain the student is familiar with the design of the itinerary.

Questions:

1. In what city will Emmy begin her vacation?
2. How many cities will Emmy visit before she tours Trier?
3. Where will Emmy eat breakfast in Berlin?
4. In what city does Emmy plan on boarding a train?
5. When she visits Cologne, what time does Emmy plan to tour historic breweries?
6. On what date is Emmy planning to photograph lakes?
7. In Cologne, Emmy will take a cruise on what famous river?
8. In Dresden, what time does the acting out of the medieval battle begin?
9. What time is Emmy planning on retiring to bed on May 9th?
10. On what date does Emmy plan to learn how to ski?
11. In what city will Emmy find ancient Roman drainage systems?

12. In what two cities does Emmy plan on riding a bicycle?
13. While in Trier, Emmy is planning a picnic at what time?
14. In what city will Emmy watch an orchestra?
15. What time will Emmy eat lunch at the Stone Wall Café?
16. In Dresden, Emmy is planning on dancing at what kind of club?
17. After Dresden, Emmy is planning to visit what city?
18. On what date will Emmy be dining at the Piper's Plate?
19. At what time does Emmy's train leave for the Alps?
20. On May 3rd, where is Emmy planning to eat breakfast?
21. In what city will Emmy find several Gothic churches?
22. In Frankfurt, what time is Emmy planning to eat dinner?
23. In how many cities is Emmy planning to visit a museum?
24. On what date will Emmy be in Berlin?
25. Where is Emmy planning on renting a moped?

Answers:

- | | |
|---------------------------|-------------------------|
| 1. Berlin | 13. 2:30 p.m. |
| 2. Three | 14. Berlin |
| 3. Gabbi's Bratwurst Hut | 15. 1:30 p.m. |
| 4. Munich | 16. Jazz |
| 5. 3:00 – 6:15 p.m. | 17. Cologne |
| 6. May 13 | 18. May 3 |
| 7. The Rhine | 19. 8:30 a.m. |
| 8. 3:30 p.m. | 20. Strudel King |
| 9. 11:15 p.m. | 21. Trier |
| 10. May 13 | 22. 8:00 p.m. |
| 11. Trier | 23. Two |
| 12. Cologne and Frankfurt | 24. May 1 |
| | 25. Trier and Frankfurt |

CHAPTER II



FIXED-DISTANCE, STAND MAGNIFIERS

- Precision Linen Tester
- Illuminated Stand Magnifier

Note: Always begin the ENVISION II curricula with the lesson specific to the magnifier prescribed to the student by the low vision clinician. For example, if your student was prescribed a fixed-distance, dome magnifier, ensure that the student completes the chapter specific to magnifiers of that type before working through the remaining chapters.

Lesson 2.1

INTRODUCTORY EXERCISE USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will become familiar with the recommended magnifier and learn how to clean it. The instructor should allow the student time to touch the magnifier and ask questions regarding its function, construction, etc.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lens cleaning cloth

Exercise:

1. Prepare a clean, uncluttered workspace in which the student can investigate the magnifier and practice cleaning it.
2. Show the student how to remove the magnifier from its case. Explain that the magnifier should be placed only the reading materials and should never be set upon rough or hard surfaces, which can scratch the lens. Return the magnifier to its case and emphasize the importance of storing the magnifier in the case when not in use.
3. Allow the student to remove the magnifier from

its case. Show him how to handle the magnifier without touching and smudging the lens. Usually a suitable method for holding a stand magnifier is to use the thumb and forefinger of the dominant hand to grip it by its frame.

4. If the magnifier contains a source of illumination, show your student how to turn the light on and off. Show your student how he can use the magnifier to explore objects in his environment by holding the magnifier up to his eye with one hand while using his other hand to bring objects such as coins, CD cases, and maps into the focus of the magnifier. Explain that the object is “in focus” when it looks sharpest through the magnifier. If the student has not learned the concept of “in focus,” use the exercise from #5 in “Things To Do Before Using ENVISION” (p. 41).
5. Demonstrate how to clean the magnifier with the lens cleaning cloth by rubbing both sides of the lens. Explain to your student that he should use only special lens cleaning tissue or lens cleaning cloth since regular tissue and paper towels can scratch the lens. Return the magnifier to the student and let him practice using the lens cleaning cloth to rub both sides of the lens.
6. Let the student hold the magnifier and try activating the light and looking at different objects. Discuss with the student questions or comments he has regarding the purpose of the

magnifier and, caring for it. This time allows the student to familiarize himself with the weight, size, and shape of the device. Before moving to the next exercise, ensure that the student has had adequate time to explore the magnifier.

7. After the student has had time to perform an initial investigation of the magnifier, you might choose to open a dialogue with him concerning any apprehension he may have about using the magnifier. You might start by asking the student how he feels about using the magnifier. His answer might be similar to the following: "Well, I might use the magnifier at home, but I will probably not use it as much in school." Try responding to his answer with a question such as "You must have a lot of reading to do in class. How will you do it if you won't use the magnifier very often in class?" etc. Ideally, your goal is to dispel your student's fears by leading him to a positive conclusion regarding those scenarios he finds distressing. Many students who use optical devices are reassured when they realize that other students are usually self-involved and pay little attention to the optical devices.

Lesson 2.2

BASIC USE EXERCISE USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will become familiar with basic localizing and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 2.2 Basic Use Exercise Sheet

Exercise:

1. Prepare a clean, uncluttered workspace in which the student can undertake the following exercise.
2. Place the Basic Use Exercise Sheet for Lesson 2.2 in a position that will allow the student to scan it comfortably, without straining his back, neck, and arms.
3. Instruct your student to remove the magnifier from its case. Confirm that he is grasping the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier by its frame. If the lens of the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Should the magnifier have a source of illumination, instruct the student to turn the light on. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Exercise Sheets. If necessary, work with your student to situate the page so that glare is reduced.
5. Ask the student to look through the lens of the magnifier and locate the top left of the Basic Use Exercise Sheet. Tell your student that the technique of finding specific locations on a page is called "localization." If your student has difficulty locating the top left of the page, show him how by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.
6. When your student can locate the top left of the page, show him how to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the page from top to bottom. Explain that this movement is called "scanning."

7. After your student has familiarized himself with the layout of the page, ask him to locate the first image of the first row on the page and begin scanning from left to right the first row of objects on the page. As your student scans, ask him to describe what he sees so you can verify his responses.
8. When your student has completed scanning the first row of objects, show him how to scan back to the left on the same row before descending to the next row to be scanned. If needed, use hand-over-hand assistance.
9. Encourage your student to continue scanning the contents of the page. Don't forget to verify his descriptions and confirm that he is scanning back to the left on the same row before descending to the next row. If needed, offer hand-over-hand assistance. Note: Depending on the power and viewing area of the magnifier, your student might complain of simultaneously seeing two or three rows of images as he scans. The ENVISION II curricula were purposely designed to achieve this effect in order to train the student in maintaining concentration on the appropriate line, which should remain in the center of the magnification field.
10. As your student reads words and numbers, pay particular attention to what types of reading errors are made so appropriate adjustments can be arranged. If the student is failing to read parts

of words, he may have a field loss. To deal with this possibility, make sure that the student continues scanning with the magnifier across the entire line of text and into the margin. This ensures that the student has scanned all text, and isn't just guessing at the ends of words. If "skipping" continues to be a problem, refer the student back to the low vision clinician.

11. Toward the end of the lesson, the student will encounter drawings in which several details are exhibited. Instruct your student to examine the image by using the same technique he used to orient himself with the contents of the entire page, i.e., beginning at the top of the picture and scanning from left to right and back to the left until the bottom of the image is in view. When your student begins scanning the more detailed images, prompt him to describe some of the particulars he sees. For example, if the image depicts several birds in a tree, and your student reports that he sees "a tree," you might prompt him to look more closely at the image by asking him to find, describe, and count the objects in the tree. Ideally, after a few prompts, your student should begin to describe such details on his own.

12. If your student is unable to read the words or numbers of a particular line, ask him to try scanning the next line. If he is still unable to identify the text and complains that items on the page look too small or blurry, the student may have reached his print size limit, or he may be fatigued. Repeat the exercise the next day. If the same results emerge, make a note of the problem and postpone the remainder of the exercise until you can speak to the student's low vision clinician about the difficulties he is experiencing.
13. When your student completes the exercise, congratulate him. If necessary, you might ask him to re-scan any rows of images he found difficult to interpret. However, if he seems fatigued or agitated, allow him to take a short break before trying again. Remember such a learning process should not be rushed. Moreover, each lesson should end on a positive note, with the student feeling encouraged about his progress.

Enrichment Opportunity: Let the student use the magnifier to examine the contents of a pocket, purse, drawer, or pencil can. Even dust, lint, chewed erasers, and gum wrappers look interesting through the lens of the magnifier.

Lesson 2.3

BASIC READING EXERCISE USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will use basic localizing and scanning techniques to read a story.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 2.3 Basic Reading Exercise Sheets, "Bratwurst Buffoonery"

Exercise:

1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following exercise.
2. Place the Lesson 2.3 Basic Reading Exercise Sheets of a point size that he regularly uses, in a position that will allow him to read without straining his back, neck, and arms.
3. Instruct the student to remove the magnifier from its case. Confirm that he is holding the magnifier in a manner that prevents the lens from being smudged. If the student is not, demonstrate again how he should do so by using the thumb and

forefinger of his dominant hand to grip the magnifier by its frame. If the lens of the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Should the magnifier have a source of illumination, instruct the student to turn the light on. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Exercise Sheets. If necessary, work with your student to situate the pages so that glare is reduced.
5. Instruct your student to look through the lens of the magnifier and locate the top left of the first page of the Lesson 2.3 Basic Reading Exercise. Tell your student that the technique of finding specific locations on a page is called "localization." If your student has difficulty locating the top left of the page, show him how by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.

6. After your student can locate the top left of the page, instruct him to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the page from top to bottom.
7. Instruct your student to start scanning the first line and read the text aloud. Verify the words he reads and observe his technique, confirming that he is scanning back to the left on the same line before descending to the next line to be read. If necessary, you may offer hand-over-hand assistance to help reinforce proper scanning techniques.
8. Encourage the student to continue reading the story. However, if he becomes tired or agitated, allow him to take a short break before continuing. Moreover, if your student seems to tire easily and is unable to read the whole story without becoming discouraged, set smaller goals for him. For example, you might instruct the student to read one or two paragraphs at a time. Such a strategy should help prevent the student from feeling overwhelmed. Notice what types of reading errors

are made so any needed adjustments can be arranged. If the student is failing to read parts of words, he may have a field loss. To deal with this possibility, make sure that the student continues scanning with the magnifier across the entire line of text and into the margin. This ensures that the student has scanned all text, and isn't just guessing at the ends of words. If "skipping" continues to be a problem, refer the student back to the low vision clinician.

9. If your student is unable to read the story in the point size chosen, allow him to try reading the story in the next largest size provided.
10. If, after allowing your student to try reading the text in a different point size, he insists that the text still looks blurry or too small, cease the exercise and try again the next day, when the student is fresh. If the same difficulties emerge, record the smallest print size your student can read comfortably and report the information to the low vision clinician.

Lesson 2.4

ENRICHMENT EXERCISE USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will learn the concept of tracing while reinforcing basic localizing and scanning techniques.

Note: "Tracing" is a term used to denote the visual following of stationary lines in the environment.

Though tracing is a term used primarily for training with distance devices, it seems an appropriate term for near magnification devices when the task calls for following lines that are not related to text.

Materials:

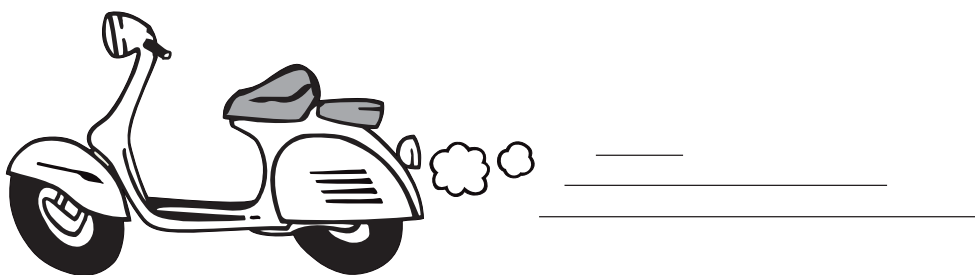
- Magnifier, as recommended by the low vision clinician
- Lesson 2.4 Enrichment Exercise Sheets
- Washable crayon

Exercise:

1. Ask your student to prepare a clean, uncluttered workspace in which to undertake the following exercise.
2. Tell your student that he is to use his magnifier and washable crayon to help Emmy and her brothers find their way through two mazes.

3. Instruct your student to place the Lesson 2.4 Enrichment Exercise Sheet entitled “Moped Maze” in a position that will allow him to scan it, trace it and write on it without straining his back, neck, or arms. Verify that the Enrichment Exercise Sheet has been positioned so your student can view it and write on it comfortably.
4. Ask your student to remove the magnifier from its case. Confirm that he is grasping the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using his thumb or forefinger to grip the magnifier by its frame. If the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.
5. Should the magnifier have a source of illumination, instruct the student to turn the light on. If your student’s magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Exercise Sheets. If necessary, work with your student to situate the pages so that glare is reduced.
6. Instruct your student to look through the lens of the magnifier and locate the top left of the “Moped Maze.” Tell your student that the technique of finding specific locations on a page is called “localization.” If your student has difficulty locating the top left of the page, show him how by using the following effective technique:

- Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.
7. Tell your student to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the pages from top to bottom. Mention to him that he should pay particular attention to where Emmy and the moped are placed on the page.
 8. Instruct your student to locate Emmy again, as she represents the starting point of the maze. Tell your student to begin at the point where Emmy stands and use the magnifier and washable crayon to trace and mark the correct path to the moped.



9. Closely monitor your student's progress through the maze, ensuring that he is able to trace the same path on which he begins, i.e., confirm that your student is not crossing over into other pathways within the labyrinth. If your student shows signs of fatigue or frustration, allow him to rest a short while before continuing. If needed, assist your student with hand-over-hand.
10. When your student solves the maze by marking the correct path to the moped, congratulate him and take a short break. When the student is ready to continue the exercise, repeat the steps above with the more challenging maze, labeled "Castle Maze."
11. After the student has solved both mazes, use a moist tissue to remove markings from both Enrichment Sheets.
12. The next day, the exercise should be repeated, starting at the end of the maze and working toward the starting point. By this reversal, the student is able to trace in many directions.

Lesson 2.5

INTRODUCTORY REVIEW USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will review proper handling and cleaning techniques for the recommended magnifier. Allow your student ample time to ask questions concerning the magnifier and its usefulness.

Materials:

- Magnifier, as recommend by the low vision clinician
- Lens cleaning cloth

Review:

1. Ask the student to prepare a clean, uncluttered workspace in which to practice cleaning and handling the magnifier.
2. Tell your student that you would like to watch him clean the magnifier.
3. Instruct your student to remove the magnifier from its case. Notice the way your student handles the magnifier. Is he holding the magnifier in a manner that will prevent the lens from being smudged? If he is not, gently remind him that the best way to avoid smudging the lens is to use the thumb and forefinger of his dominant hand to grip the magnifier by its frame.

4. Tell your student to set down the magnifier. Notice whether he remembers to place the magnifier on the reading material. If your student has forgotten the importance of keeping the magnifier away from rough surfaces, remind him that rough surfaces could harm the magnifier and that he should only place the magnifier on the reading material.
5. Ask your student to show you how to clean the magnifier. Your student should clean the magnifier by rubbing the lens with a lens cleaning cloth or lens cleaning tissue. Ask your student why he should use only a lens cleaning cloth or lens cleaning tissue to clean the magnifier. If your student fails to tell you that the reason he should use only lens cleaning cloth or lens cleaning tissue is because other materials might scratch the lens, you should emphasize again that materials not specifically designed to clean lenses can damage them. If your student has forgotten how to clean the magnifier, take the device from the student and show him how to clean it by rubbing the lens with a lens cleaning cloth. When you are finished, return the magnifier to the student and let him practice using the lens cleaning cloth to rub both sides of the lens.
6. Should the magnifier contain a source of illumination, instruct your student to show you how to turn the light on and off. If your student

has forgotten how to activate the light, show him how to switch on and off the light.

7. Allow your student time to hold the magnifier, activate the light, and ask any questions that may have occurred to him during the review.

Note: If, when you and your student begin working within the two other chapters of this curriculum, you wish to skip the Introductory Exercise Lessons, which deal with the cleaning of the magnifier, do so only if your student has mastered the proper techniques for handling and cleaning the magnifier. Otherwise, work with your student through the lessons, continuing to use the magnifier prescribed by the low vision clinician.

Lesson 2.6

BASIC USE REVIEW USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will review basic localizing and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 2.6 Basic Use Review Sheets

Review:

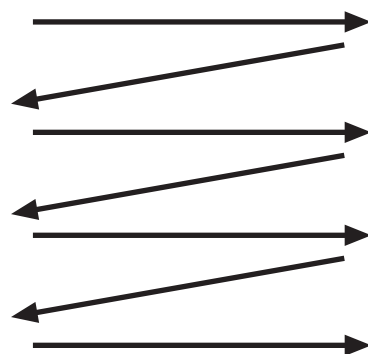
1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Instruct the student to place the Basic Use Review Sheets for Lesson 2.6 in a position that will allow him to scan them comfortably, without straining his back, neck, and arms.
3. Allow your student to remove the magnifier from its case. Is he holding the magnifier in a manner that prevents the lens from being smudged? If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier by its frame. If the lens is dirty, instruct the student to

clean it with a lens cleaning cloth or lens cleaning tissue.

4. Should the magnifier contain a source of illumination, notice whether your student remembers to turn on the light. If he forgot, prompt him to activate the light. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Review Sheets. If necessary, work with your student to situate the pages so that glare is reduced.
5. Ask your student to look through the magnifier and show you the proper procedure for locating the top left of the first Basic Use Review Sheet for Lesson 2.6. Remind your student that the technique of finding specific locations on a page is called "localization." If your student has forgotten the procedure, review with him how to find the top of the page by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.

6. After your student has exhibited the correct procedure for locating the top left of the review sheet, request that he demonstrate the technique for familiarizing himself with the layout of the page. If your student fails to scan the page from top to bottom by using a left-to-right and back-to-left zigzag pattern, review this method with him.
7. Now tell your student that you want him to scan the first row of images on the page and describe what he sees through the magnifier. Ensure that he uses the technique in step #5 for locating the first image to be scanned.
8. After your student has successfully scanned the first row of items, instruct him to scan the rest of the rows on the page, describing aloud what he sees through the magnifier. As your student scans, verify his descriptions and notice whether he scans back to the left on the same row before descending to the next row to be scanned. If he fails to do this, remind him of the technique, and if needed, use hand-over-hand to demonstrate. If your student complains of simultaneously seeing two or three rows of images or text through the magnifier, remind him that the ENVISION II curricula were purposely designed to achieve this effect in order to help him practice maintaining focus on the appropriate line, which should always remain in the center of the magnification field.

9. When your student encounters images in which several details are exhibited, notice whether he remembers to orient himself with their contents by using a left-to-right and back-to-left zigzag pattern to scan the images from top to bottom. If he forgot the technique, allow him to review it and try scanning the images again.
10. On the second Basic Use Review Sheet for Lesson 2.6, your student will encounter text and images of various content, shape, and size. Notice whether he remembers to orient himself with the contents of the page. If needed review step #6 with him.
11. When your student comprehends the layout of the page, prompt him to read the passages aloud. As your student reads, ensure that he remembers to scan back to the left on the same line of text before descending to the next line to be scanned. When your student examines the accompanying images, notice whether he remembers to orient himself with their contents by using a left-to-right and back-to-left zigzag pattern to scan the images from top to bottom.



12. As your student reads the text and examines the images, ensure that he maintains his dominant eye directly over the magnifier's lens, moving his head and magnifier hand together instead of trying to follow the magnifier by simply turning his head or eyes. Note: If your student can read the larger print but is unable to read one or both of the smaller font sizes, then this may be an indicator that the student may have reached his print size limit, or he may be fatigued. Repeat the exercise the next day. If the same results emerge, you may need to explain the situation to the low vision clinician and talk about the possibility of increasing the magnification power of the prescribed device.
13. When your student completes the review, congratulate him. If necessary, allow your student to take a break before working on the next review.

Lesson 2.7

BASIC READING REVIEW USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will review basic localizing and scanning techniques that are necessary for reading a story.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 2.7 Basic Reading Review Sheets, "The Mysterious Castle of Count Squirrely"

Review:

1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Direct the student to place the Lesson 2.7 Basic Reading Review Sheets of comfortable point size in a position that will allow him to read without straining his back, neck, and arms.
3. Instruct your student to remove the magnifier from its case. Confirm that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the

magnifier by its frame. If the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Should the magnifier contain a source of illumination, notice whether your student remembers to turn on the light. If he forgot, prompt him to activate the light. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Review Sheets. If necessary work with your student to situate the pages so that glare is reduced.
5. Instruct your student to look through the magnifier and show you the correct method for locating the top left of the first page of the Lesson 2.7 Basic Reading Review. Your student should remember to locate the top left of the page by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.

If your student has forgotten the technique, review it with him, using hand-over-hand if necessary. If needed, remind your student that

the technique of finding specific locations on a page is called “localization.”

6. After your student can locate the top left of the page, instruct him to look through the lens of the magnifier and familiarize himself with the layout of the page. Does your student observe the page layout by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the pages from top to bottom? If not, review this method with your student, using hand-over-hand technique if necessary.
7. After your student perceives the page layout, ask him to locate the beginning of the story and begin scanning the text, reading aloud as he does so. As your student reads, confirm that he is scanning the same line back to the left before descending to the next line to be read. Encourage your student to continue reading the story, but watch for signs of fatigue. If he becomes tired or agitated, allow him to take a short break, and if needed set smaller goals for him, e.g., asking the student to read only one or two paragraphs at a time.
8. Congratulate your student when he completes the review. Reassure him that reading will become easier as he gains proficiency at using the magnifier.

Lesson 2.8

ENRICHMENT REVIEW USING A FIXED-DISTANCE, STAND MAGNIFIER

Objective:

Student will review basic localizing and scanning techniques.

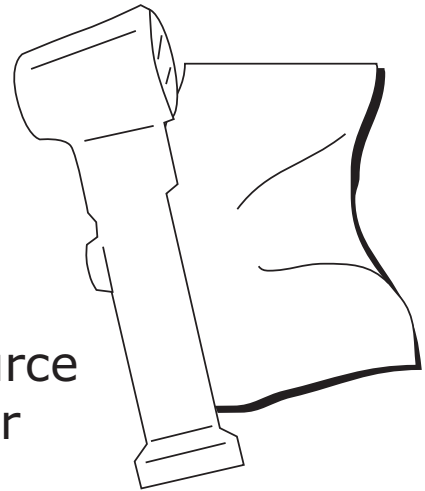
Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 2.8 Enrichment Review Sheets
- Washable crayon

Review:

1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Instruct the student to place the Enrichment Review Sheets for Lesson 2.8 in a position that will allow him to scan them comfortably, without straining his back, neck, and arms.
3. Direct your student to remove the magnifier from its case. Confirm that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier by its

frame. If the lens of the magnifier is dirty, ask the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.



4. Should the magnifier contain a source of illumination, notice whether your student remembers to turn on the light. If he forgot, prompt him to activate the light. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Review Sheets. If necessary, work with your student to situate the page so that glare is reduced.
5. Explain to your student that he is to use his magnifier to read the numbered descriptions of castle components and then locate with the magnifier the correspondingly numbered sections of the castle.
6. After you explain the objective of the exercise to your student, instruct him to look through the lens of magnifier and demonstrate the proper method for finding the top left of either Enrichment Review Sheet. Your student should remember to locate the top left of the page by using the following effective technique:

- Begin with the magnifier positioned near the bottom middle of the page.
- Scan straight up from the bottom middle to the top middle of the page.
- Scan left from the top middle to the top left corner of the page.

If your student has forgotten the technique, review it with him using hand-over-hand if necessary. If needed, remind your student that the technique of finding specific locations on a page is called “localization.”

7. After your student has demonstrated the proper procedure for locating the top left of the page, encourage him to familiarize himself with both Enrichment Review Sheets (definitions and castle illustration). Ensure that your student investigates the page layouts by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the pages from top to bottom. If necessary, review the technique with him, using hand-over-hand.
8. When your student is familiar with the shape and area of the castle, ask him to use his magnifier to read the first definition and search the castle for the object described. Tell him to use the washable crayon to circle the item when he has found it.

9. As your student works, watch his technique, ensuring that he is scanning the page of definitions and the depiction of the castle in a systematic left-to-right and back-to-left zigzag pattern. If needed, use hand-over-hand to help your student read a couple of definitions and find the corresponding items.
10. Encourage your student and confirm his answers as he works. However, if your student becomes tired or frustrated before finding all the items, allow him to take a short break before continuing the exercise.
11. After your student has completed the exercise, prompt him to clean with a damp tissue any markings from the Enrichment Review Sheets.

Enhancement Opportunity: You may want to allow your student to search the library or Internet for information about real castles that still exist today. You might also allow him to listen to Robin Hood or other medieval period story on tape. If a story on tape is unavailable, have a friend read the story to the student.

CHAPTER III



VARIABLE-DISTANCE, HAND-HELD MAGNIFIERS

LED Illuminated
Hand Magnifiers

Note: Always begin the ENVISION II curricula with the lesson specific to the magnifier prescribed to your student by the low vision clinician. For example, if your student was prescribed a fixed-distance, stand magnifier, ensure that the student completes the chapter specific to magnifiers of that type before working through the remaining chapters.

Lesson 3.1

INTRODUCTORY EXERCISE USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will become familiar with the recommended magnifier and learn how to clean it. The instructor should allow the student time to touch the magnifier and ask questions regarding its function, construction, etc.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lens cleaning cloth

Exercise:

1. Prepare a clean, uncluttered workspace in which the student can investigate the magnifier and practice cleaning it.
2. Show the student how to remove the magnifier from its case. Explain that the magnifier should be placed only on the reading materials and should never be set upon rough or hard surfaces, which can scratch the lens. Return the magnifier to its case and emphasize the importance of storing the magnifier in the case when not in use.

3. Allow the student to remove the magnifier from its case. Show him how to hold the magnifier without touching and smudging the lens. Usually a suitable method for holding a variable-distance, hand-held magnifier is to use the thumb and forefinger of the dominant hand to grip the device by its handle.
4. If the magnifier contains a source of illumination, show your student how to turn on and off the light. Instruct him not to touch the light source. You might also show your student how he can explore objects in his environment by holding the magnifier up to his eye with one hand while using his other hand to bring objects such as coins, CD cases, and maps into the focus of the magnifier. Explain that the object is “in focus” when it looks sharpest through the magnifier. If the student has not learned the concept of “in focus,” use the exercise from #5 in “Things To Do Before Using ENVISION” (p. 41).
5. Demonstrate how to clean the magnifier with the lens cleaning cloth by rubbing both sides of the lens. Explain to your student that he should use only special lens cleaning tissue or lens cleaning cloth since regular tissue and paper towels can scratch the lens. Give the magnifier back to the student and let him practice using the lens cleaning cloth to rub both sides of the lens.

6. Allow your student to hold the magnifier and ask questions regarding its purpose or any other questions he has concerning the magnifier and caring for it. Let the student activate the magnifier's light and try looking at different objects in his environment. This time allows the student to familiarize himself with the weight, size, and shape of the device. Before moving to the next exercise, ensure that the student has had adequate time to explore the magnifier.
7. After the student has had time to perform an initial investigation of the magnifier, you might choose to open a dialogue with him concerning any apprehension he may have about using the magnifier. You might start by asking the student how he feels about using the magnifier. His answer might be similar to the following: "Well, I might use the magnifier at home, but I will probably not use it as much in school." Try responding to his answer with a question like "You must have a lot of reading to do in class. If you think you won't use the magnifier very often in class, how will you do your reading?" etc. Ideally, your goal is to dispel your student's fears by leading him to a positive conclusion regarding those scenarios he finds distressing. Many students who use optical devices are reassured when they realize that other students are usually self-involved and pay little attention to their use of optical devices.

Lesson 3.2

BASIC USE EXERCISE USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will become familiar with basic localizing, focal, and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 3.2 Basic Use Exercise Sheet

Exercise:

1. Prepare a clean, uncluttered workspace in which the student can undertake the following exercise.
2. Place the Basic Use Exercise Sheet for Lesson 3.2 in a position that will allow the student to scan it comfortably, without straining his back, neck, and arms. Posture is particularly important when using a variable-distance, hand-held magnifier since the student must maintain focal distance to improve visual acuity. An APH GrandStand or other similar reading easel may help to increase your student's reading stamina.
3. Allow your student to remove the magnifier from its case. Ensure that he is holding the magnifier in a manner that prevents the lens from being

smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier by its handle.

4. Should the magnifier have a source of illumination, instruct the student to turn the light on. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Exercise Sheets. If necessary, work with your student to situate the page so that glare is reduced.
5. Use the first words or numbers on the Basic Use Exercise Sheet to show the student how to find the correct focal distance with a hand-held magnifier by using the following effective method:
 - Locate the image to be seen with your finger.
 - Lay the magnifier near your finger and flat on the page.
 - Position the dominant eye directly over the magnifier's lens.
 - Slowly lift the magnifier away from the page until focus is achieved.
 - Move eye toward or away from the lens to increase or decrease the field of view (this is how one finds the "working distance").

- Emphasize the importance of holding the lens parallel to the page. Then inform the student that the lens should also be parallel to the eye so the user's line of sight is perpendicular to the lens.
 - Demonstrate how, in order to maintain a perpendicular line of sight, the student must always position his dominant eye directly above the lens. That is, the student should not try to read by simply moving his arm and turning his head to follow the magnifier, as this common but incorrect technique is often the cause of students' inability to maintain focus.
6. Give your student the magnifier and ask him to find the focal distance. If he appears to be struggling, use hand-over-hand assistance. Before continuing, make sure he understands the concept of focal distance and knows how to find it on his own. If needed, continue to practice finding the focal distance. You might also allow the student to review the focus exercise from #5 in "Things To Do Before Using ENVISION" (p. 41).
 7. If your student is able to find the focal distance on his own, show him how to find the top left of the first Lesson 3.2 Basic Use Exercise Sheet by using the following effective technique:

- Begin with the magnifier positioned near the bottom middle of the page.
- Scan the magnifier straight up from the bottom middle to the top middle of the page.
- Scan the magnifier from the top middle to the top left corner of the page.

Remind your student that the technique of finding specific locations on a page is called “localization.”

8. After your student can locate the top left of the page, show him how to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the page from top to bottom. Explain that this movement is called “scanning.”
9. After your student has familiarized himself with the layout of the page, ask him to locate the first image of the first row on the page and begin scanning from left to right the first row of items. As your student scans, encourage him to describe what he sees so you can verify his responses.
10. When your student has completed scanning the first row of images, show him how to scan back to the left on the same row before descending to the next row to be scanned. If needed, use hand-over-hand assistance.

11. Encourage your student to continue scanning the rows of images while describing what he sees through the magnifier. Don't forget to verify his descriptions and confirm that he is scanning back to the left on the same row before descending to the next row to be scanned.
12. As your student reads words and numbers, pay particular attention to what types of reading errors are made so appropriate adjustments can be arranged. If the student is failing to read parts of words, he may have a field loss. To deal with this possibility, make sure that the student continues scanning with the magnifier across the entire line of text and into the margin. This ensures that the student has scanned all text, and isn't just guessing at the ends of words. If "skipping" continues to be a problem, refer the student back to the low vision clinician for eccentric viewing exercises.
13. Toward the end of the lesson, the student will encounter drawings in which several details are exhibited. Instruct your student to examine the image by using the same technique he used to orient himself with the contents of the entire page, i.e., beginning at the top of the depiction and scanning from left to right and back to the left until the bottom of the image is in view. When your student begins scanning the more detailed

images, prompt him to describe some of the particulars he sees. For example, if the image depicts several birds in a tree, and your student reports that he sees “a tree,” you might prompt him to look more closely at the image by asking him to find, describe, and count the objects in the tree. Ideally, after a few prompts, your student should begin to describe the details on his own.

14. As your student scans, observe his technique and determine whether he is having difficulty. If he is struggling, be sure to ask him what is wrong. If his answer lacks specificity, guide him with questions such as “Are the images too blurry?” or “Are you getting tired?” Difficulty in reading with the magnifier might be the result of several factors. If he complains of blurriness, he may be having trouble maintaining focal distance. To determine whether this is the case, you might try the following exercise:

- Use hand-over-hand to help him find the correct focal distance.
- Help him maintain focal distance by continuing hand-over-hand while he reads.
- As he reads, ask him whether your hand being over his helps to make the words less blurry.

If he affirms that hand-over-hand helps alleviate blurriness, then fatigue might be inhibiting him

from maintaining correct focal distance when he reads alone. If fatigue seems to be a problem, place a gel wrist support or other appropriate device under his arm for support. A reading stand may also help reduce fatigue.

If your student complains about distortion, make sure he is holding the magnifier parallel to the reading material, that he is looking through the center of the magnifier, and that his head and arm are moving as one while he reads. Again, it is important that he look straight down through the magnifier's lens. If he continues to complain of distortion, show him how to decrease the working distance by moving his eye closer to the magnifier.

15. If your student seems to be grasping the techniques needed for reading with the variable-distance, hand-held magnifier, encourage him to continue scanning the page. Should your student be unable to identify the contents of a particular row, ask him to try scanning the next two rows. If he is still unable to identify the images and complains that they are too small or blurry, the student may have reached his print size limit, or he may be fatigued. Repeat the exercise the next day, when the student is fresh. If the same results emerge, make a note of the problem and postpone the remainder of the exercise until you can speak to the student's low vision clinician about the difficulties he is experiencing.

16. When your student has completed the exercise, congratulate him. If necessary, you might ask the student to repeat the exercise. However, if the student seems fatigued or agitated, take a short break before trying again. During the break, you might also ask your student what other objects he would like to view through the magnifier. The designs of variable-distance, hand-held magnifiers allow for fairly easy viewing of “cool stuff” that your student might enjoy investigating. Such objects might be insects, the grooves on a fingertip, stamps, and coins.

Enhancement Opportunity: Allow the student to examine a gemstone ring under magnification. This is always a pleasant and eye-opening exercise.



Lesson 3.3

BASIC READING EXERCISE USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will use basic localizing, focal, and scanning techniques to read a story.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 3.3 Basic Reading Exercise Sheets, "Steak or Snake?"

Exercise:

1. Ask the student to prepare a clean, uncluttered workspace in which to undertake the following exercise.
2. Place the Lesson 3.3 Basic Reading Exercise Sheets of comfortable point size in a position that will allow the student to read without straining his back, neck, and arms. Again, because the student must maintain focal distance to read efficiently with a hand-held magnifier, posture is particularly important. A student whose arms, back, or neck fatigue quickly because of poor posture will be unable to maintain the correct focal distance. If poor reading posture continually inhibits your

student from reading, allow him to try using an APH GrandStand or other similar reading easel, as such a device will help to increase reading stamina. A cushion or gel wrist support will also reduce arm fatigue.

3. Ask your student to remove the magnifier from its case. Confirm that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier by its handle. If the lens of the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.
4. Should the magnifier have a source of illumination, instruct the student to turn the light on. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Exercise Sheets. If necessary work with your student to situate the pages so that glare is reduced.
5. Instruct your student to look through the lens of the magnifier and locate the top left of the first page of the Lesson 3.3 Basic Reading Exercise. Remind your student that finding specific locations on a page is called "localization." If your student has difficulty locating the top left of the page, show him how by using the following effective technique:

- Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.
6. After your student can locate the top left of the page, instruct him to familiarize himself with the layout of the page by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the page from top to bottom.
 7. Instruct your student to return to the first line of the text, find the focal distance, and begin reading the text aloud. If your student has difficulty finding the correct focal distance, show him again how to find the focal distance (see #5 in Lesson 3.2).
 8. As your student reads the story aloud, verify the words he reads and observe his technique, confirming that he is scanning back to the left on the same line of text before descending to the next line to be read. If necessary, you may offer hand-over-hand assistance to help reinforce proper focal and scanning techniques.
 9. Encourage the student to read the whole story. However, if he shows signs of fatigue, allow him to take short breaks. Moreover, if your student seems to tire easily or acts discouraged, set

smaller goals for him. For example, you might instruct the student to read one or two paragraphs at a time before taking a break. Such a strategy should help prevent the student from feeling overwhelmed. Notice what types of reading errors are made so appropriate adjustments can be arranged. If the student is failing to read parts of words, he may have a field loss. To deal with this possibility, make sure that the student continues scanning with the magnifier across the entire line of text and into the margin. This ensures that the student has scanned all text, and isn't just guessing at the ends of words. If "skipping" continues to be a problem, refer the student back to the low vision clinician.

10. If your student is unable to read the story in the point size chosen, allow him to try reading the story in the next, largest point size.
11. If, after allowing your student to try reading the text in a different point size, he insists that the text still looks blurry or too small, cease the exercise and try again the next day, when the student is fresh. If the same difficulties emerge, record the smallest print size your student can read comfortably and report the information to the low vision clinician.

Lesson 3.4

ENRICHMENT EXERCISE USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will learn the concept of tracing while reviewing basic localizing, focal, and scanning techniques. Note: “Tracing” is a term used to denote the visual following of stationary lines in the environment. Though tracing is a term used primarily for training with distance devices, it seems an appropriate term for near magnification devices when the task calls for following lines that are not related to text.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 3.4 Enrichment Exercise Sheets
- Washable crayon

Exercise:

1. Ask your student to prepare a clean, uncluttered workspace in which to undertake the following exercise.
2. Instruct your student to place the Enrichment Exercise Sheets next to each other in a position

that will allow the student to scan and trace them comfortably, without straining his back, neck, and arms.

3. Ask your student to remove the magnifier from its case. Confirm that he is grasping the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier by its handle. If the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.
4. Should the magnifier have a source of illumination, instruct the student to turn the light on. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Exercise Sheets. If necessary, work with your student to situate the pages so that glare is reduced.
5. Explain to your student that he is to use the magnifier to read a set of questions and descriptions concerning specific geographic locations. Tell him that he will have to find the correct answer to the questions by searching the map with his magnifier. Clarify that some questions can be answered verbally, while others will require him to mark an appropriate location on the map.

6. After explaining the objective, encourage your student to look through the lens of the magnifier and locate the top of each of the first two Enrichment Review Sheets. (At this point, don't allow your student to look at the answer page.) If your student has difficulty locating the top left of the pages, show him how by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.
7. After your student can locate the top left of the pages, instruct him to familiarize himself with the page layouts by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the pages from top to bottom.
8. When your student is familiar with the outline of the map, ask him to use his magnifier to read the first description. After he has read the first description, prompt him to search the map for the correct location. Instruct him to use the washable crayon to circle the answer when he has found it.
9. As your student searches the map, observe his technique, ensuring that he uses the left-to-right

and back-to-left zigzag scanning technique to investigate the map. Your student may also practice his tracing techniques by following country borders and rivers.

10. Encourage your student to continue working until he has discovered all of the appropriate locations. If your student becomes tired or frustrated before finding all the items, allow him to take a short break before continuing the exercise. At this point, as an option, you may allow the student to search the answer sheet in order to verify his answers.
11. After your student has completed the exercise, allow him to use a moist tissue to wipe markings from the Enrichment Sheets.

Activity and Answers:

1. Find and circle Count Squirrelly's haunted castle.
2. The city of Munich is south of what forest? [Bohemian Forest]
3. Find and circle the ship that is traveling on the Rhine River, one of Germany's main rivers.

4. What large body of water is just north of Count Squirrelly's haunted castle? [North Sea]
5. What two cities sit closest to the Rhine River? [Cologne and Bonn]
6. Find and circle the castle located in Heidelberg.
7. Use the scale to discover approximately how many miles separate Berlin and Dresden. [100 miles]
8. The Wessen River helps feed what large body of water? [North Sea]
9. What city lies just north of the renowned Black Forest? [Stuttgart]
10. Find and circle Gabbi's Bratwurst Hut.
11. What river lies closest to Munich? [Isar River]
12. Approximately how many miles separate Frankfurt and Heidelberg? [50 miles]
13. Find and circle the western-most city on the map. [Trier]
14. Berlin is closest to what sea? [Baltic Sea]
15. What river lies between the Ems River and the Elbe River? [Wessen River]
16. Find and circle the shop called Muster's Moped Madness.

Lesson 3.5

INTRODUCTORY REVIEW USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will review proper handling and cleaning techniques for the recommended magnifier. Allow your student ample time to ask any questions concerning the magnifier and its usefulness.

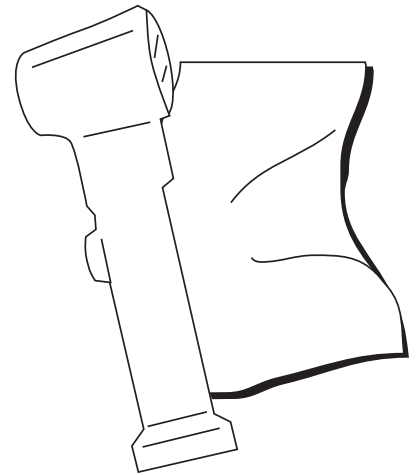
Materials:

- Magnifier, as recommended by the low vision clinician
- Lens cleaning cloth

Review:

1. Ask your student to prepare a clean, uncluttered workspace in which to practice cleaning and handling the magnifier.
2. Tell your student that you would like to watch him clean the magnifier.
3. Ask your student to remove the magnifier from its case. Notice the way your student handles the magnifier. Is he holding the magnifier in a manner that will prevent the lens from being smudged? If he is not, gently remind him that the best way to avoid smudging the lens is to use the thumb and forefinger of his dominant hand to grip the magnifier by its handle.

4. Tell your student to set the magnifier down. Notice whether he remembers to place the magnifier on the reading material. If your student has forgotten the importance of keeping the magnifier away from rough surfaces, remind him that rough surfaces could damage the magnifier and that he should place the magnifier only on the reading material.



5. Ask your student to show you how to clean the magnifier. Your student should clean the magnifier by rubbing the lens with a lens cleaning cloth or lens cleaning tissue. Ask your student why he should use only lens cleaning cloth or special lens cleaning tissue to clean the magnifier. If your student fails to tell you that the reason he should use special lens cleaning cloth or tissue is because other materials might scratch the lens, you should emphasize again that materials not specifically designed to clean lenses can damage them. If your student has forgotten how to clean the magnifier, take the device from the student and show him how to clean it by rubbing the lens with a lens cleaning cloth. When you are finished, return the magnifier to the student and let him practice using the lens cleaning cloth to rub both sides of the lens.

6. Allow the student to hold the magnifier and ask any questions that may have occurred to him during the review. Moreover, if the magnifier contains a source of illumination, ask the student if he remembers how to turn the light on. If he has forgotten, demonstrate how to turn the light on.

Note: If, when you and your student begin working within the two other chapters of this curriculum, you wish to skip the Introductory Exercise Lessons, which deal with the cleaning of the magnifier, do so only if your student has mastered the proper techniques for handling and cleaning the magnifier. Otherwise, work with your student through the lessons, continuing to use the magnifier prescribed by the low vision clinician.

Lesson 3.6

BASIC USE REVIEW USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will review basic localizing, focal, and scanning techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 3.6 Basic Use Review Sheets

Review:

1. Ask your student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Ask the student to place the Basic Use Review Sheets for Lesson 3.6 in a position that will allow him to scan them comfortably, without straining his back, neck, and arms. Because posture is particularly important when using a variable-distance, hand-held magnifier, you might wish to use an APH GrandStand or other similar reading easel to help increase your student's reading stamina.
3. Ask your student to remove the magnifier from its case. Is he is holding the magnifier in a manner

that prevents the lens from being smudged? If he is not, demonstrate again how he should do so by using the thumb and forefinger of his dominant hand to grip the magnifier by its handle. If the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning cloth.

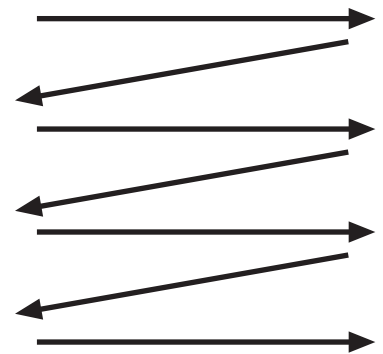
4. Should the magnifier contain a source of illumination, notice whether your student remembers to turn the light on. If he forgot, prompt him to activate the light. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Review Sheets. If necessary, work with your student to situate the page so that glare is reduced.
5. Instruct your student to look through the lens of the magnifier and use the first image in the first row to show you how to find the focal distance. Remind your student that the technique of finding specific locations on a page is called "localization." Your student should be able to find the first image by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.

If your student forgot the technique above, review it with him until he demonstrates the ability to locate the top left of the page.

6. When your student has located the first item in the first row, ensure that he exhibits the proper technique for finding the focal distance by using the following effective method:
 - Locating the image to be seen with his finger.
 - Laying the magnifier near his finger and flat on the page.
 - Positioning his dominant eye directly over the magnifier's lens.
 - Slowly lifting the magnifier away from the page until focus is achieved.
 - Moving eye toward or away from the lens to increase or decrease the field of view. (This is how he finds the "working distance.")

If needed, review any of the above steps with your student.

7. After your student can locate the first item on the page and has demonstrated his ability to find the focal distance, request that he demonstrate the technique for familiarizing himself with the layout of the page. Does your student scan the page from top to bottom in a systematic left-to-



right and back-to-left zigzag pattern? If he fails to display this method, review it with him.

8. Now tell your student that you want him to return to the top of the page and scan the first row of images on the page and describe what he sees through the magnifier. Ensure that he uses the technique in step #5 for locating the first image to be scanned.
9. After your student has successfully scanned the first row of images, instruct him to scan the rest of the rows on the page, describing aloud what he sees through the magnifier. As your student scans, verify his descriptions and notice whether he scans back to the left on the same row before descending to the next row to be scanned. If he fails to do this, remind him of the technique, and if needed, use hand-over-hand to demonstrate.
10. When your student encounters the images in which several details are exhibited, notice whether he remembers to orient himself with their contents by using a left-to-right and back-to-left zigzag pattern to scan the images from top to bottom. If he forgot the technique, allow him to review it and try scanning the images again.

11. On the second Basic Use Review Sheet for Lesson 3.6, your student will encounter text passages and images of various content, shape, and size. Notice whether he remembers to orient himself with the contents of the page. If needed, review step #7 with him.
12. After your student comprehends the layout of the page, prompt him to read the passages aloud. As your student reads, ensure that he remembers to scan back to the left on the same line before descending to the next line to be read. When your student examines the accompanying images, notice whether he remembers to orient himself with their contents by using a left-to-right and back-to-left zigzag pattern to scan the images from top to bottom.
13. As your student reads the text and examines the images, ensure that he is holding the magnifier parallel to the page and that his dominant eye remains directly above the lens of the magnifier. If needed, demonstrate how, in order to maintain a perpendicular line of sight when scanning, he must always keep his dominant eye directly over the magnifier's lens, moving his head and magnifier hand together instead of trying to follow the magnifier by simply turning his head.

Note: If your student can read the larger print but is unable to read one or both of the smaller print sizes, then this may be an indicator that the student may have reached his print size limit, or he may be fatigued. Repeat the exercise the next day. If the same results emerge, you may need to explain the situation to the low vision clinician and talk about the possibility of increasing the magnification power of the prescribed device.

14. When your student completes the review, congratulate him. If necessary, allow your student to take a break before working on the next review.

Lesson 3.7

BASIC READING REVIEW USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will review the basic localizing, focal, and scanning techniques required to read a story.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 3.7 Basic Reading Review Sheets, "Emmy the Map Maven"

Review:

1. Ask your student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Instruct the student to place the Basic Reading Review Sheets of comfortable point size in a position that will allow the student to read without straining his back, neck, and arms.
3. Ask your student to remove the magnifier from its case. Confirm that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do so by using the thumb and forefinger of

his dominant hand to grip the magnifier by its handle. If the magnifier is dirty, instruct the student to clean the lens with a lens cleaning cloth or lens cleaning tissue.

4. Should the magnifier have a source of illumination, notice whether your student remembers to turn the light on. If he forgot, prompt him to turn on the magnifier's light. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on the Basic Reading Review Sheets. If necessary, work with your student to situate the pages so that glare is reduced.
5. Instruct your student to look through the lens of the magnifier and show you the correct method for locating the top left of the first page of the Lesson 3.7 Basic Reading Review. Your student should remember to locate the top left of the page by using the following effective technique:
 - Begin with the magnifier positioned near the bottom middle of the page.
 - Scan straight up from the bottom middle to the top middle of the page.
 - Scan left from the top middle to the top left corner of the page.

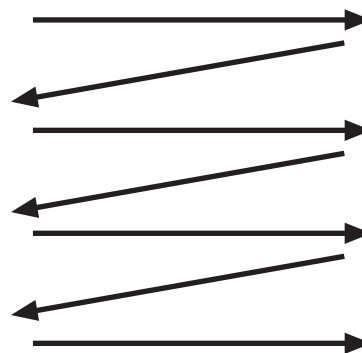
If your student has forgotten the technique, review it with him using hand-over-hand if necessary. If needed, remind your student that the technique of finding specific locations on a page is called “localization.”

6. When your student has located the top left of the first page, ensure that he exhibits the proper technique for finding the focal distance by:
 - Locating the image to be seen with his finger.
 - Laying the magnifier near his finger and flat on the page.
 - Positioning his dominant eye directly over the magnifier’s lens.
 - Slowly lifting the magnifier away from the page until focus is achieved.
 - Moving eye toward or away from the lens to increase or decrease the field of view. (This is how he finds the “working distance.”)

If needed, review any of the above steps with your student.

7. After your student can locate the first item on the page and has demonstrated his ability to find the focal distance, request that he demonstrate the technique for familiarizing himself with the layout of the page. If your student fails to scan the page from

top to bottom using a left-to-right and back-to-left zigzag pattern, review this method with him.



8. Ask your student to return to the beginning of the story and read the text aloud. As your student reads the story aloud, verify the words he reads and observe his technique, confirming that he is tracking back to the left on the same line of text before descending to the next line to be read. Encourage your student to continue reading the story, but watch for signs of fatigue in your student. If he becomes tired or agitated, allow him to take a short break, and if needed set smaller goals for the student, e.g., asking the student to read only one or two paragraphs at a time.
9. Congratulate your student when he completes the review.

Lesson 3.8

ENRICHMENT REVIEW USING A VARIABLE-DISTANCE, HAND-HELD MAGNIFIER

Objective:

Student will review basic localizing, focal, scanning, and tracing techniques.

Materials:

- Magnifier, as recommended by the low vision clinician
- Lesson 3.8 Enrichment Review Sheets
- Washable crayon

Review:

1. Ask your student to prepare a clean, uncluttered workspace in which to undertake the following review.
2. Instruct the student to place the Enrichment Review Sheets next to each other in a position that will allow the student to scan and trace them comfortably, without straining his back, neck, and arms.
3. Ask your student to remove the magnifier from its case. Confirm that he is holding the magnifier in a manner that prevents the lens from being smudged. If he is not, demonstrate again how he should do

so by using the thumb and forefinger of his dominant hand to grip the magnifier by its handle.

4. Should the magnifier contain a source of illumination, notice whether your student remembers to turn the light on. If he forgot, prompt him to turn on the magnifier's light. If your student's magnifier is illuminated, there exists the possibility that the light may contribute to a minimal amount of glare on some of the ENVISION II Review Sheets. If necessary, work with your student to situate the pages so that glare is reduced.
5. Explain to your student that he will be using his magnifier to read a set of questions and descriptions concerning specific locations or depictions on a map. Tell him that he will have to find the correct answer by using his magnifier to search the map. Clarify that some questions can be answered verbally, while others will require him to mark with the washable crayon an appropriate location or object.
6. After explaining the objective, encourage your student to use the magnifier to locate the top left of each of the first two Enrichment Review Sheets. (At this point, don't allow your student to look at the answer page.) Your student should remember how to locate the top left of the pages by using the following effective technique:

- Begin with the magnifier positioned near the bottom middle of the page.
- Scan straight up from the bottom middle to the top middle of the page.
- Scan left from the top middle to the top left corner of the page.

If needed review the method above.

7. After your student can locate the top left of the pages, instruct him to familiarize himself with the page layouts by looking through the magnifier and using a left-to-right and back-to-left zigzag pattern to scan the pages from top to bottom.
8. When your student is familiar with the layout of the map and question sheet, encourage him to read each question and then use his magnifier to find the corresponding answer. Some questions ask that your student mark or circle a specific location. For these instances, ensure that your student successfully denotes these locations. Your student may also practice his tracing techniques by following the roads and rivers to different parts of the map.
9. Encourage your student to continue working through the review until he has discovered all of the appropriate locations and can answer the questions correctly. However, be sure to allow your student to rest if he becomes fatigued or

frustrated before finding all of the items. After the student answers all the questions, you may, as an option allow him to search the answer sheet in order to verify his answers.

10. Congratulate your student, and allow him to use a moist cloth to clean any crayon marks off the Review Sheets.

Activities and Answers:

1. What sea is located northwest of Germany?
[North Sea]
2. Poland is located above what country?
[Czech Republic]
3. Find and place a check mark by the Danube River.
4. Luxembourg touches the borders of what three countries? [Belgium, France, and Germany]
5. Use the scale to find the approximate length of the road that runs from Stuttgart to Munich.
[130-150]
6. Touching the northernmost tip of Germany is what country? [Denmark]
7. Is Hanover closer to Magdeburg or Düsseldorf?
[Magdeburg]
8. Is the Elbe River closer to Switzerland or Denmark? [Denmark]

9. What city has the northernmost airport?
[Hamburg]
10. To the north of Poland is what body of water?
[Baltic Sea]
11. How many sections of roadway depicted meet at Nuernberg? [6]
12. Find and circle the following cities: Kiel, Bremen, and Wurzburg.
13. What city depicted is closest to France?
[Saarbrücken]
14. Locate, circle, and count the airports represented on the map. [13]
15. What body of water would you cross if you traveled by car from Rostock to Hanover?
[Elbe River]

Note: Should you need to create large print maps or atlases for your student who has low vision, you might obtain a copy of ArcView GIS. Produced by ESRI, ArcView GIS is a popular and powerful mapping and geographic software application that allows users to create high quality maps that can be modified to serve a student's visual needs. To find out if you qualify for educational or federal government discounts on ArcView GIS, contact ESRI Telebusiness at 1-800-447-9778. You may also visit ESRI on the Web at www.esri.com.

Lesson 3.9

REPORTING BACK TO THE CLINICIAN

Objective:

To provide the clinician with the results of the student's near magnification device training.

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", (p. 150) 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. 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 near magnification 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 II: Vision Enhancement Program Using Near Magnification Devices.



AMERICAN PRINTING HOUSE
FOR THE BLIND, INC.

ENVISION II

Using Prescriptively Recommended Optical Devices Skill Performance Checklist for Near Magnification Devices

After training, fill out this form and send to clinician

Student Name _____ Date _____

Optical Device _____

Teacher's Name _____ Signature _____

SKILL	STUDENT DOES	STUDENT DOESN'T DO	COMMENTS
Basics			
Cleaning			
Storage			
Retrieval			
Set-up			
Materials Position			
Use of Reading Stand			
Task Lighting			
Selected Visual Field/Eye			
Hand Selection			
Grip			
Stabilization of Hand and Materials			

SKILL	STUDENT DOES	STUDENT DOESN'T DO	COMMENTS
Reading Concepts			
In Focus			
Focal Distance			
Working Distance			
Localization			
Scanning			
Shifting to the next line			
Tracing			
Content Interpretation			
Symbols/Signs			
Illustrations			
Maps			
Text			
Independent Use			
Educational			
Leisure			

	8 pt. (1 M)	12 pt. (1.5 M)	16 pt. (2 M)	20 pt. (2.5 M)
Font size chosen to read				

	8 pt. (1 M)	12 pt. (1.5 M)	16 pt. (2 M)	20 pt. (2.5 M)
Smallest font size student could read				

	8 pt. (1 M)	12 pt. (1.5 M)	16 pt. (2 M)	20 pt. (2.5 M)
Magnifier chosen to read each font size				

Length of Training Time _____	Comments _____
Curriculum Used _____	_____
_____	_____
_____	_____
_____	_____

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