



# Texas School for the Blind and Visually Impaired

## Outreach Programs

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## Lesson Progression for Telescope Use in the Classroom

### Lesson 1: Copying Single Symbols

#### Procedure

1. Introduce today's lesson by saying you will be working on copying with the monocular. For copying lessons, the student will need to be seated comfortably positioned and facing the chart, feet resting on a surface. He will need to have a piece of paper, pencil, and colored pencils or markers on his desk.
2. Copying with the monocular requires constant looking, placing the monocular down, and writing on paper. The monocular can either be worn around the neck, or placed on the desk so that it won't roll off. A thick rubber band looped around the monocular will slow it from rolling, or use a "rollbuster" for this purpose (available from APH).
3. Ask the student to number his paper to correspond with the chart\* activity you have prepared. Place the chart far enough away that the student has to use his monocular. Ask the student to focus on the chart, scan it and tell you what the format is.
4. Depending on the age and level of your student, he should begin looking at #1, and copying what he sees onto his paper. This can be single letters/numbers/shapes, or short words. Introduce the word "peek". Encourage the student to take one peek per symbol or word, try to remember it, and copy it down on their paper without taking a second peek at the same item. (you are building visual memory, which will be necessary for copying longer information passages)
5. After the student has completed #1, instruct him to now take another peek at the #1 on the chart. Is his the same? He should make any corrections if needed at this time.
6. Continue in this manner until he finishes copying everything on the chart.

\*Charts typically used are called *1" Ruled Chart Tablets*. The 24"x16" sized spiral is most convenient for the itinerant teacher. When preparing materials in charts, leave a blank page between pages for easier viewing. Write on charts using a dark marker with a wider point, such as the Mr. Sketch markers.

## Lesson 2: Copying Words and Short Phrases

### Procedure

1. Check the condition of the monocular. Is it stored safely and conveniently? Is it in good condition? Ask your student if he had the opportunity to use the monocular during the week. If so, what did he use it for?
2. Today you will introduce a reinforcement system for correct and frequent use of the monocular. For now you will only be concerned with speed and accuracy, and the frequency of use will be measured once the student knows how to copy up to approximately 5 words per peek. Your reinforcement system should include:
  - list of (monocular) behaviors you want to reinforce
  - list of things the student enjoys (is willing to work toward)
  - “price list” of what each privilege will cost
  - record of points earned and exchanged
  - progress sheet of speed and accuracy
  - record of things the student can see at a distance with and without the monocular
3. For this activity, use a chart prepared with one numbered column of words. The words can be reading vocabulary, spelling words, or similar words used within the context of the classroom and/or expanded core curriculum. The words list you prepare could also consist of words that apply to a hobby the student has, such as the names of baseball players, collecting cards, etc.
4. Instruct the student to first scan the entire chart, tell you what the format is, then number his paper to correspond to the chart. He should then proceed to copy the words, one peek per word.
5. At this point you will introduce proof reading his work. When he is finished copying the list, ask him if he thought he missed any words. Encourage him to compare the work on his paper with the words on the chart. Count the number of words correct, and reinforce.
6. Write down the number of words correct on the new reinforcement and progress chart. Start counting points for this paper.

## **Lesson 3: Copying Words and Short Sentences or Phrases**

### Procedure

1. Prepare riddles on a chart, with the answer to the riddle hidden under a flap. The student should number his paper to 10 (or for however many riddles you have prepared on your chart). He should scan the page to find the general layout of the information, then begin by reading all the way through the first riddle. Once he has read it, he should return to the beginning of the line and start to copy, one word at a time (or more than one word if he is capable of doing this). He should turn his paper over to write the answer to the riddle. Younger children enjoy making and illustrating their own riddle book to read to a friend.
2. When he has finished copying the sentence/phrase, ask your student to check his work and make any corrections before you check it for accuracy.
3. Continue in this way until he has copied about 5 riddles.
4. Fill in the progress chart for this assignment.

## Lesson 4: Copying Longer Sentences and Paragraphs

### Procedure

1. Prepare a chart with a poem you think the student might enjoy. Shel Silverstein tends to be a popular choice. Limericks also work nicely, as well as tongue twisters. For older students, use materials of interest, such as the lyrics to a popular song (find these at web sites).
2. Instruct the student to scan the entire page to get an idea of the format, and then to read the entire poem/lyrics out loud.
3. Tell the student that today you are going to see how many words he can copy with the fewest amounts of peeks. To do this, he must read, remember, then write down as much as he can. (Try to make this sound like it will be great fun!) Watch as he copies, and note the number of words he copies per peek. What happens when he comes to longer, more complex words?
4. When he is finished, provide him with feedback on how many words he was copying per peek (average). Ask him to proof and correct his work. Enter the information (words per peek) on his progress chart.
5. As the student gets better at copying sentences, you may want to introduce a stopwatch and allow him to time himself as he completes a copying assignment. The goal is to decrease the amount of time it takes to copy as many words as possible. Times can be entered on the progress sheet.

## Lesson 5: Copying Math Formats

### Procedure

1. Prepare a chart with math problems that you know will not be difficult for the student. One format that works well is the one in which each answer provides a letter of the alphabet that then leads toward the answer of a riddle (for younger students).
2. Instruct the student to scan the entire page to get an idea of the format, and then number his page to correspond to the chart.
3. Since copying numbers is typically slower because there are no context clues, do not stress copying with fewer and fewer peeks. The student should proceed to copy and answer the math problems and check his work.
4. Many classrooms use an overhead projector to demonstrate how to work math problems. Arrange for this type of practice in an empty classroom, if possible, as it can be much harder for students with some types of etiologies to copy from a source that is emitting light.