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The Environmental Language Strategy

The Environmental Language Strategy is an intervention strategy designed to enhance literacy and language for students with oral expressive and reading/writing disorders. The ELS is based on dynamic psycholinguistic principals and presented using a meaningful, *Top-Down* interactive model. The strategy uses a procedural, activity approach to the development of oral language, reading and written expression skills within a controlled language model. The following is an overview of the Environmental Language Strategy. The Written Phase of the strategy is modified to reflect the needs and skill level of individual student. (See student samples).

GENERAL LANGUAGE GUIDELINES

1.0   The Language of Instruction (Teacher Model)

1.1   Use well-referenced statements. Ensure that your use of language is as well referenced as possible. That is, minimize your use of gestures and non-specific terms (e.g. "it", "this", "one", and other pronouns), as the overuse of pronouns encourages context dependent language.

Example: Statements such as "Please put *it* over *there*", should be replaced by, "Please put the Guess Who game on the shelf."

1.2   Avoid the use of questions to which simple "yes/no" responses may be made (e.g., "Did you have a good weekend?"). Replace such questions with "leading" comments and/or 'cloze' statements requiring further elaboration on the student's part (e.g., It certainly was a warm, sunny weekend. Hey, you were going for a hike yesterday!)

1.3   Re-phrase (i.e., repeat in enriched form) any poorly structured and/or non-referenced statements made by the student. Your modeling will preserve and indicate support for the student's *ideas*, while providing him/her with an enriched language model.

Example: Student: "It was good." Adult: "Yes, you really enjoyed Star Trek V. The special effects were awesome."

REMEDIAL GUIDELINES

2.0   Preparation

2.1   Select a procedural activity characterized by a clearly identifiable linear sequence (e.g., a science experiment, a magic trick, card trick, a simple cooking activity, or craft). The activity should have a definite beginning, middle and end, and initially involve between 4 and 6 steps. An attempt should be made to select an activity relevant to the child's current classroom themes or within the child's expressed area of interest. Activity books such as SCIENCEWORKS: An Ontario Science Centre Book of Experiments, Entertaining Science Experiments With Everyday Objects, and The Know How Book of Experiments are suggested sources.

         Example: "How to make a Cartoon" (see attached "Cartoon" experiment).

2.2   Explain the main objective of the activity to the student by making a descriptive statement.

         Example: We are going to make a "moving face" using a pencil and paper.

2.3   Lay out all necessary materials, referencing each object and action as it is placed on the table (e.g., a blank piece of paper, scissors).

2.4   Describe briefly, in correct sequence, the procedure to be followed. Make frequent use of temporal words (e.g. first, finally). Make frequent reference to the names of the materials to be used, so that key words will be remembered and used by the student during later stages. That is, avoid non-referenced terms and gestures.

         Note: An alternative to describing the procedure orally is to read the procedural instructions together with the child from the source material (e.g. book, recipe) from which the activity was drawn. It is recommended that this be done only when the written description is sufficiently detailed to provide an appropriate language model.

3.0   Carrying Out the Activity

3.1   Proceed, step-by-step, through the procedural activity, making certain to avoid the use of non-specific terms during instruction-giving. If the student makes use of non-specific or incorrect terms, rephrase his/her statements or questions (as described in Section 1.3 above).

         Example: Student: "Do I trace it?" Adult: "Right. First trace the face on the top of the paper."

3.2   Discuss each step as it is carried out during the written phase of the procedure in order to model the target language/words you wish the student to use later,. Avoid the use of questions whenever possible. A turn-taking strategy to use in place of questioning is the "CLOZE" technique. Begin a sentence and call upon the student to complete it (e.g., First trace the face on to the top of the *pause*…). Use your intonation, eye contact and body stance to signal the completion of the statement (i.e., "fill in" the missing information). Encourage dialogue

regarding the principles behind the experiment and/or predictions of the outcome, if the student initiates this. However, ensure that the <u>primary</u> focus of conversation is to discuss the steps to completing the activity.

3.3   Periodically, do a linear review by pausing and reviewing the steps carried out thus far (e.g., Wow, look at the work we have done! So far we have…Now we have to…). This review of the sequence will provide the student information necessary for re-writing of the activity, and will help to preserve the unity of the procedure. This review also helps to focus the student to a specific step within the sequence.

The initial stage of the activity is now complete.

4.0   <u>The Written Phase</u>

4.1   Remove all materials from view (out of context). Tell the student that you are going to create a set of written instructions that explain how to do the activity. Provide a purpose for these instructions (e.g., to take to school, to take home and share with parents or siblings, for other students to read.) Have the student stand with you at the blackboard/whiteboard. Explain to the student that together you will be reviewing the procedure used to create the final product (e.g., a moving face), and that you will be writing down a word or two representing the main idea of each step. State the importance of outlining information as a means of sequencing/organizing ideas prior to writing. Provide the student with a cloze statement to elicit the first activity: "The very first step in this activity was 'to draw the face on the top of the (_____)". If the student is able to complete the sentence appropriately, write down the key word(s) used to describe the step (e.g., page). If you are unable to elicit an appropriate response, provide the student with the necessary information. Repeat this process until all steps have been described, and all key points noted down. As you progress, periodically review the list of key words in order to demonstrate the sequence that has been created thus far. If the student skips a step (i.e., describes the step out of sequence), write the key words for that step through the use of the CLOZE technique (e.g., Before rolling the upper page into a tube, we (_____), or through the provision of a hint through a direct statement (e.g., Hm, at this point in the activity the upper page is blank).

4.2   Expanding key words into sentences: Explain to the student that you are now going to write a sentence to describe each step of the activity. Point to the first key word(s) and model the expansion process by restating, in full sentence form, the step represented by the cue. Next, write the full sentence form on the blackboard. Have the student expand subsequent key words into sentences. Initially, all sentences should be written down by the teacher. However, more advanced students may eventually share in the writing process. As during earlier stages, expand incomplete by restating, in enriched form, the student's initial responses.

Example:

Key word	Student's Expansion	Enriched Expansion
"draw"	"draw a face"	"Great: Next, draw a face on the page."

Provide statements which will alert the student to missing details without asking questions (e.g., The folded strip of paper has an upper page and a lower page). It may also be helpful to check off key words as they are used or to circle words that you think should be combined in one sentence. After the student dictates each sentence, re-read that sentence to him/her. Periodically, have the student read the instructions produced thus far. Continue this process until all instructions have been written down.

5.0   The "CLOZE" Phase

Use your series of instructions as the basis for follow-up CLOZE activities. If the instructions have been written on the blackboard, key words should be erased by the instructor. The student should then be asked to dictate this vocabulary which is written out by the instructor. Later, when working on spelling, the student can write in the words. Key vocabulary may be selected from each set of functions completed to compile an ongoing vocabulary list or word bank. These words should be reviewed regularly and made use of whenever possible in future oral to written sequences. "Pencil and paper" cloze exercises may also be created.

Example:

"Draw a _____ on the lower _____."
"Draw a face   on the lower page_____."

6.0   Generalizing the Procedure

Depending on the needs of the individual student, the following additional procedures may be employed:

6.1   The instructions may be read from the board into a tape recorder. The teacher should read the first instruction in order to provide a model for the student, and the remainder of the steps be read alternately by the student and the teacher. These instructions may then be typed out using the word processing features of the computer. Have the student play the tape, listen to each step or key phrase and then stop the tape and repeat the step or phrase aloud. Type what the student says on to the computer exactly as it was stated by the student. Once the entire set of instructions has been typed out in this manner, have the student play the tape while looking at the written instructions, in order to monitor the instructions for errors. The student should be asked to correct any differences between the oral and written instructions. The instructions should then be printed out.

6.2   The printed instructions may be cut into sentences and placed in scrambled order. The student may then be asked to paste the sentences on a paper in correct sequence.

6.3   Diagrams may be drawn to represent each step of the experiment, and the student may then be asked to match sentences to the diagrams.

6.4   Instructions can be incorporated into a "lab report" including sections on "purpose", "materials", "observations" and "conclusions".

6.5   The student may compile an individualized "How to" book, containing the instructions for all of the activities which were carried out, along with diagrams, title pages (e.g. "Water Experiments"), scientific explanations for given experiments.

6.6   To facilitate oral elaboration on the part of the student, he/she may teach another student how to do a given experiment, magic trick, etc.

6.7   Activities may be selected to complement the current science or Social Studies curriculum within the regular classroom. Instructions and a visual representation of the activity (e.g., a finished product, a diagram, etc.) should then be taken by the student to his/her regular classroom for presentation to the classroom teacher and the class, or sent home with the student to show his/her parents.

HOW TO MAKE A CARTOON

1.   Cut a strip of paper.

2.   Fold the paper in half so that the top edge meets the bottom edge.

3.   Draw a face on the lower page.

4.   Trace the face onto the upper page, but change the expression on the face.

5.   Roll the upper page up to the fold, to make a tube.

6.   Hold down the top corner of the fold with one hand.

7.   Insert the pencil in the tube.

8.   Slide the pencil up and down quickly.
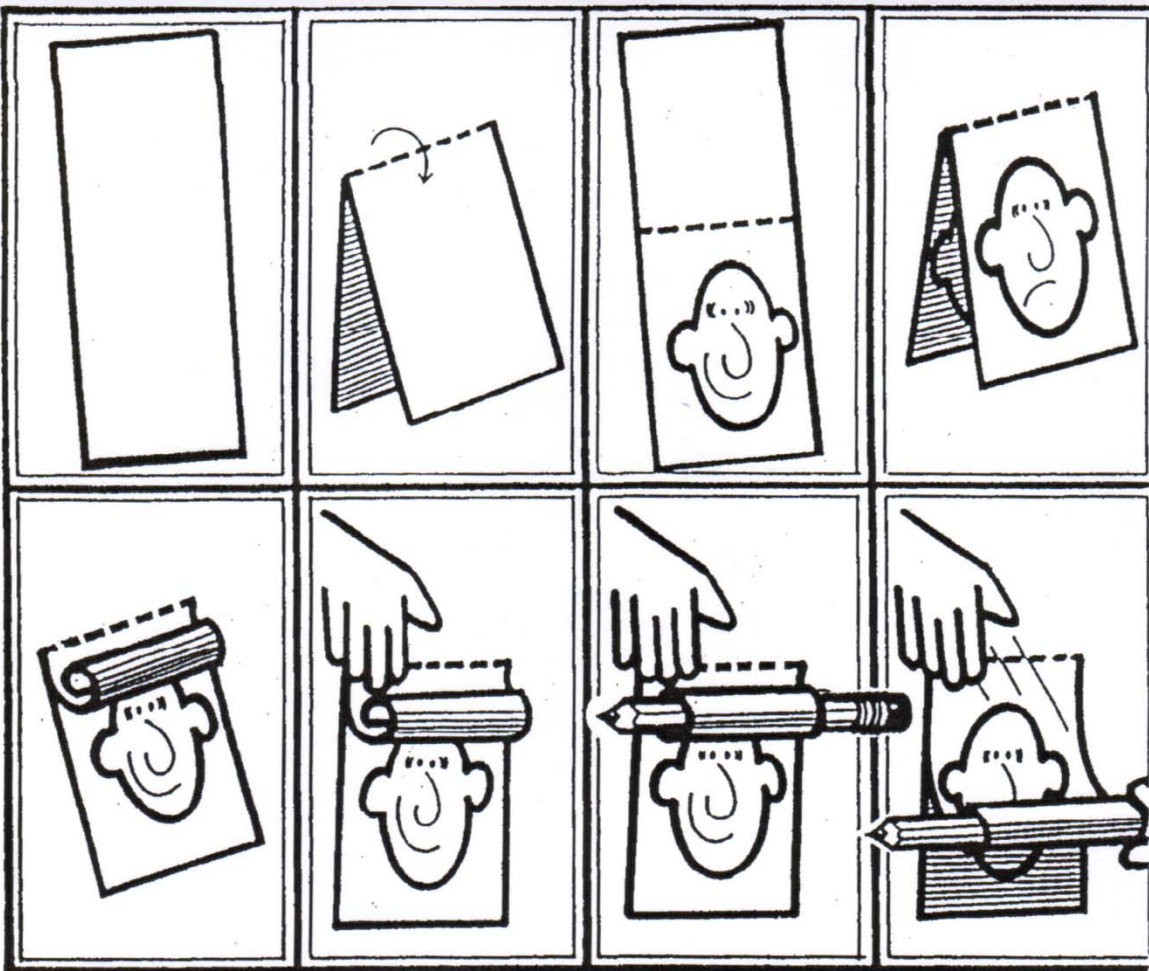
Reference: Entertaining Science Experiments, p. 38

Environmental Language Strategy: Reference Books

Amery, Heather, <u>The KnowHow Book of Experiments</u>

Cobb, Vicki and Kathy Darling, <u>Bet You Can</u>

Cobb, Vicki and Kathy Darling, <u>Bet You Can't</u>

Gardner, Martin, <u>Entertaining Science Experiments with Everyday Objects</u>

Herbert, Don, <u>Mr. Wizard's Supermarket Science</u>

Munson, Howard, <u>Science Activities with Simple Things</u>

Ontario Science Centre, <u>Scienceworks</u>

Paull, John, <u>Ladybird Junior Science: Air</u>

Penrose, Gordon, <u>Dr. Zed's Dazzling Book of Science Activities</u>

Quinn, Vernon, <u>50 Card Games for Children</u>

Shalit, Nathan, <u>Science Magic Tricks</u>

Zubrowski, Bernie, <u>Messing Around with Baking Chemistry</u>

Zubrowski, Bernie, <u>Messing Around with Drinking Straw</u>

Zubrowski, Bernie, <u>Messing Around with Water Pumps and Siphons</u>