UP, DOWN, OVER, UNDER: Spatial Relationship Words Gaye McNutt

A series of workable techniques that help LD children understand and read spatial relationship words

Almost from the first moment children enter school, they are faced with a barrage of spatial relationship words. Teachers tell them to put their supplies *in* their desks, their papers *on* the table, or their hands *up* if they need help. Next they are faced with directions in their schoolwork, such as draw a line *under*, an x on, or a circle *around*. Soon they are faced with learning to read, and, again, many of the words are spatial relationship words such as *up* and *down* or prepositions that are also spatially related (e.g., on and *in*).

Unfortunately, these words often are difficult for learning disabled children to learn. However, procedures will be described here that have been used with kindergarten and older LD children to help them learn to understand and to read spatial relationship words.

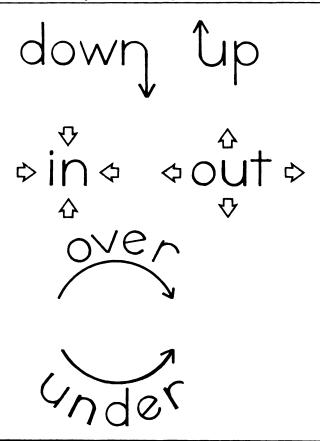
The basic technique for teaching these words uses configuration words. Configuration words contain typical print (i.e., letters of the alphabet) as well as additional "clues." This type of word is often found in the environment (e.g., the distinctive flowing print of Coca Cola). Various individuals (e.g., Goodman and Goodman 1979) have stated that very young children recognize these words as long as the print re-

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tains the distinctive form or configuration. Based on this information, the technique of adding distinctive features to words has been successfully applied to teaching spatial relationship words to LD children.

Figure 1 illustrates several spatial relationship words that have been made into configuration words. The general steps for using this basic technique to teach spatial relationship words are: (a) choosing the words, (b) introducing the words, (c) using the words, and (d) encountering the words in new situations. In all but the first step, the children are involved.

FIGURE 1 Examples of Configuration Words



Choosing the Words

First, list the spatial relationship words that may be taught. Possible words to consider are up, down, in, out, over, under, around, between, on, beside, left, right, front, back, top, and bottom. Generally, the list should include those words that are used frequently in oral language or in the readers the children are using.

Second, prioritize the list so that the words the children need to learn are presented first. This practice might include designing individual priority lists for different children based on what they already know and what they need to learn.

Third, choose the first words to be introduced. Generally, two words are introduced at a time. For example, *up* and *down* are usually presented together because the words represent related (in this instance opposite) concepts. However, a word such as *around* could be presented alone.

Fourth, prepare the materials that will be needed. The materials are described in the following sections which focus on introducing and using the words. When artistic work is needed, teachers may do their own, call on the services of an artistic colleague, or use published artwork (see listing 1 at end of article).

Introducing the Words

The introduction usually begins with a discussion involving a bulletin board, poster, or chart display that depicts the particular words. The display should be both motivational and meaningful. For example, if *up* and *down* are being introduced, the display might be a seesaw with one child, monkey, or monster in the "up" position and the other "down." Beside each would be the correct word containing an arrow pointing in the appropriate direction. Other pictures could use a trampoline, stairs, or escalators. The two basic components that should be included are: (a) the concept of each word should be clearly illustrated and easily identifiable; (b) the words should be presented with configuration clues so that they, too, are easy to identify. A third component to consider including would be the words in "plain" print beside the configuration words.

After the initial discussion to assure that the children are familiar with the words, teachers may wish to refer to the words informally whenever appropriate for several days. In this way, children have a chance to become familiar with the printed forms of the words and hear them associated with a concrete illustration.

Using the Words

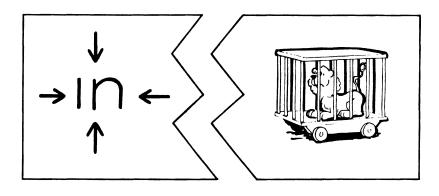
If children are to learn the words, they should be used daily in a variety of situations. The following are descriptions of several activities using the words *up* and *down* that allow children to be active participants, are motivational to most children, and allow for positive reinforcement and feedback.

Each of the children is given two cards. One contains the word *up* and the other, *down*. The words should be written with the appropriate arrows in a color different from the word. The teacher shows one illustration (picture, diagram, slide, etc.) at a time. The children then hold up the word card that describes the illustration. The children should be encouraged to say the word as they show their card. At first, this activity may be done near the display in the room or the teacher may need to say the words to provide additional help or clues for some children. If children make mistakes, the teacher should point out the configuration clues (e.g., the arrows) and help the children to differentiate the words rather than telling the children they have made mistakes. Additionally, positive reinforcement and feedback should be used as much as possible.

Another type of activity requires the teacher to hold up one word card and the children to "do what it says." (For example, up could mean to stand up.) As more spatial relationship words are added, children may be given large boxes so that they can get in the box, beside the box, et cetera. As children are doing this, they should be encouraged to say the word and should be reinforced when they do.

Individual or small group activities that do not require direct teacher supervision also may be used once the children have been introduced to several words. A set of puzzle matchups can be made (see Figure 2) using the words and illustrations.

FIGURE 2 Illustration of a Puzzle Match-up



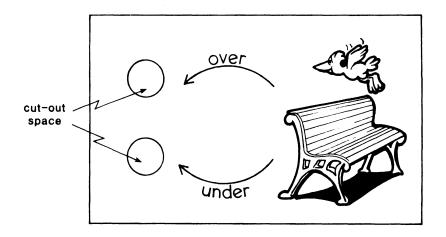
Another type of activity is a set of "bull's eye" cards. Figure 3 is an illustration of the front and back of such a card. The holes on the left side are large enough to accommodate a child's finger. The object is for the child to choose the word that matches the illustration by sticking a finger through the appropriate hole. Then, the child turns the card over to determine if the choice is correct (i.e., did the child "hit the bull's eye?"). As children become skillful in identifying the configuration words, a new set of cards can be made that contains words with and without any configuration clues. In this activity, the purpose would be to match the configuration word to the correct "plain" word. (See Figure 3, next page.)

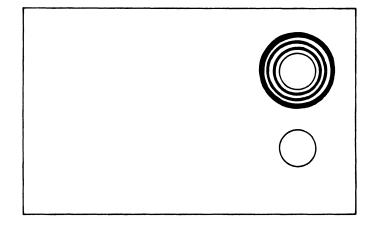
Other games or activities are also possible. For example, matching an illustration to a word can be the objective when the child is given six to eight word cards along with an equal number of cards containing illustrations. If a game board is available, it can be used with a set of the word cards. Children advance to the finish line by identifying the words. If the children say the word correctly, they advance the number of spaces indicated on the card, a spinner, or a die.

Teachers will undoubtedly identify other activities in their classrooms that can be adapted to use with the spatial relationship words the children are learning. Perhaps the most impor-

tant point is to create numerous activities that children enjoy. It is possible that some children may hold the various words upside down. If this happens, drawing a heavy green line along the bottom edge of each card and explaining its purpose (i.e., the grass is at the bottom), usually takes care of the problem.

FIGURE 3
Illustration of a "Bull's Eye" Card





Encountering the Words in New Situations

When the children become familiar with certain spatial relationship words, the elements of the words that are not actually print (e.g., the arrow associated with the word *up*) should be faded gradually. At the same time, the children should be encouraged to locate and identify these words in new situations.

One place to locate newly learned words is in books. Numerous books for children are available that contain single words on a page along with appropriate illustrations or simple text using the words. (See listing 2, 3, and 4 at end of article for some of these.)

Another place to identify newly learned words is the environment. While field trips are excellent, enlisting the help of the children's parents can provide a continuing learning environment. A general letter explaining what the child are learning and how parents can help is usually needed at first. Later, the children themselves will probably be able to point out the words they are learning to their parents.

Conclusions

This manuscript has focused on helping children learn to understand and read spatial relationship words. These same procedures can be used to help children learn other words. General types of words that can be used with these procedures include:

- 1. Color words represented in their own color (e.g., red is written in red)
- 2. Number words with the numeral or illustration near each word
- 3. Present tense verbs (e.g., run, walk, sleep) although children may read these as gerunds (e.g., running, walking, sleeping)
- 4. Concrete nouns (e.g., table, chair, various foods, animals) using pictures of the objects
- 5. Configuration words found in the environment (e.g., brand names), using the context for clues (e.g., cereal boxes, candy wrappers, et cetera)

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Materials

- 1. First Words (Handiart for the Creative Teacher). Dale Seymour Publications, P.O. Box 10888, Palo Alto, CA 94303.
- 2. Push, Pull, Empty, Full: A Book of Opposites by Tana Hoban. New York: MacMillan, 1972.
- 3. Words by Joe Kaufman. New York: Golden Press, 1968.
- 4. Big and Little by J.P. Miller. New York: Random House 1976.

References

Goodman, K.S., and Goodman, Y.S. 1979. Learning to read is natural. In L.B. Resnick & P.A. Weaver (Eds.), *Theory and practice of early reading* (Vol. 1). Hillsdale, N.J.: Lawrence Erlbaum Associates.

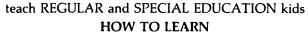
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