Contents

Introduction

The activities in *Grid and Graph It* are designed to develop listening skills, provide practice in following directions, reinforce left/right awareness, and develop skill in co-ordinate geometry and graphing. Whether listening or reading, students will follow directions and move their pencils to create clever pictures that are fun to make. Before you begin, a bit of organizing information will be helpful.

Contents

Grid and Graph It has twenty-five reproducible activities. The first seven activities are designed for one-centimetre and one-centimetre co-ordinate grid papers. The last eighteen activities are designed for five-millimetre and one-five millimetre co-ordinate axis grid papers. Reproducible blackline masters of the four types of grid paper are located in the back of the book.

Directions

Directions for the activities are presented in two distinct formats: descriptive directions and co-ordinate directions. For descriptive directions, a starting point is located, and then students are directed to move along the lines of the grid paper. For example: "Move your pencil left 3 spaces, down 2 spaces, right 1 space, up 4 spaces . . ." Co-ordinate directions focus on a grid point to start and then direct the students to move from one grid point to another. For example: "Start at (-3, 2). Move your pencil to (-3, 5), (-1, 5) . . ." Co-ordinate directions are provided on separate reproducible activity sheets. All activity directions may be read aloud to students or duplicated and distributed for students to complete independently.

Answer Key

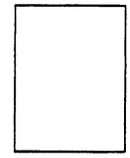
For each activity a reduced image of the final product is provided on the same page as the descriptive directions. This reduced image can be used as the answer key for the activity. The images are the same for the final products of both descriptive and co-ordinate directions.

Preparation

Select an activity and duplicate the appropriate grid paper. If you plan to distribute the activity sheets with the descriptive directions, simply cover the answer-key image with a blank piece of paper before duplicating. Students will need a sheet of grid paper, a pencil, and a rubber. They will need an activity sheet if they are to be working independently.

Using Descriptive Directions
Activity directions indicate whether the paper is to be placed horizontally or vertically.

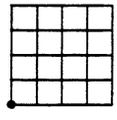
horizontally



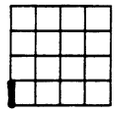
vertically

Next, students are directed to find the starting point by locating a beginning horizontal or vertical line and then counting a given number of spaces in a specific direction. Students should move along a line of the grid paper as they count the given number of *full* spaces. Full spaces are blocks that have all four corners visible. (Grid paper duplicated from the back of this book will not present a problem in locating the starting point or counting full spaces; however, commercial graph paper may have edges with spaces that are not complete. If you use commercially printed graph paper, be sure your students understand the concept of *full* spaces.)

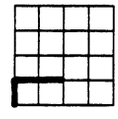
Moving the Pencil
Students construct the picture by drawing a continuous line from the starting point; their pencils should not be lifted from their papers.



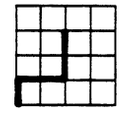
start



up 1 space



right 2 spaces



up 2 spaces

Using Co-ordinate Directions
There are two types of co-ordinate directions. For one-centimetre co-ordinate directions, students will locate the starting points by finding first a number along the bottom of the co-ordinate paper and then a number along the left edge of the paper. For example: 1-1