

Ladybug Adventures

The activities in this four-part ladybug cluster present a rich computer environment in which students can use their knowledge of numbers, measurement, and geometry to solve interesting problems. Planning and visualizing, estimating and measuring, and testing and revising are components of the ladybug activities. These activities can help students build ideas about navigation and location, as described in the Geometry Standard, and use these ideas to solve problems.

In the first part, Designing a Virtual Path, students create a path that enables the ladybug to hide under a leaf. In Part 2, Making Triangles, students will use 45- and 90-degree angles to create triangles and design paths for the ladybug. In the third part, Making Rectangles, students plan the steps necessary for the ladybug to draw rectangles of different sizes. In the last part, Ladybug Mazes, students plan a series of moves that will take the ladybug through a maze.

Individual Lessons

Lesson 1—Designing a Virtual Path

In this activity, students use their knowledge of number, measurement and geometry to design a “virtual path” which enables a ladybug to hide under a leaf. They also develop navigational skills by testing to see if their path is accurate and revising their solutions.

Lesson 2—Making Triangles

In this activity, students use 45- and 90-degree angles to create triangles, and develop an understanding of the relationship between angles and the shape of triangles. Students use their knowledge of number, measurement and geometry to design a “virtual path” using two different angles to help a ladybug reach its hiding place under a leaf.

Lesson 3—Making Rectangles

In this activity, students use their knowledge of number, measurement and geometry to plan the steps necessary for a ladybug to draw rectangles of different sizes. As they experiment, students begin to understand the relationship between the shape of a rectangle and the lengths of its sides. They also develop a sense of the amount of turn in a right angle.

Lesson 4—Ladybug Mazes

In this activity, students plan a series of moves that will navigate a ladybug through a maze. Their plans turn the ladybug at the appropriate corners and keep it on a path without crossing the walls. This activity helps students gain experience in estimate length and angle measure.