

Divide the class into pairs. Pass out a **Chip Challenge** sheet and **12 chips** of any color to each pair. Have the students place one chip in the upper left- and bottom right-hand corners of the grid. Then challenge them to place as many chips as possible on the grid so that no more than two chips line up either horizontally, vertically, or diagonally.

The chips placed in the corners also follow this rule, so no more chips can be placed diagonally between them. The maximum number of additional chips that can be placed on the board according to these rules is 10.

Hint *Have students place chips in the upper right- and lower left-hand corners as well.*

If students are able to place all 10 additional chips on the board, have them show the class how they solved the challenge. If not, have volunteers who placed the most chips on the board show the class how they did it.

Show the **Chip Challenge Solution** sheet to the class if students are struggling. Point out the various vertical, horizontal and diagonal symmetries in the solution.

MATERIALS:

- Colored plastic chips
- Chip Challenge sheet
- Chip Challenge Solution sheet

Chip Challenge

Chip Challenge (Solution)

					
					
					
					
					
					