

“Evo—the Crab” OzoBlockly Challenge

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In this challenge, you will make use of a pair of claws that fit perfectly on Evo. These claws can be used to make Evo behave like a crab gathering food. The claws are printed on a 3D printer, and the ***stl*** file is included as an attachment to this challenge. An ***stl*** file is also included to 3D print two small cubes that represent the food that “Evo—the Crab” wants to gather. Alternatively, a pair of dice can be used instead of the cubes. Figure 1 shows Evo with his claws attached.



Figure 1

You will make use of the Ozomap shown in Figure 2. A larger version of this Ozomap suitable for working with Evo is included with this challenge. Cubes are placed on the shaded squares labeled 1 and 2. Evo begins at the *Start* circle facing the direction shown by the arrow. Evo’s first task is to move block 1 to the circle labeled 1. His next task is to move block 2 to the circle labeled 2. Finally, he must move to the *Finish* circle and stop facing the direction shown by the arrow. For clarification, a 25-second video accompanies this challenge that shows Evo performing these tasks.

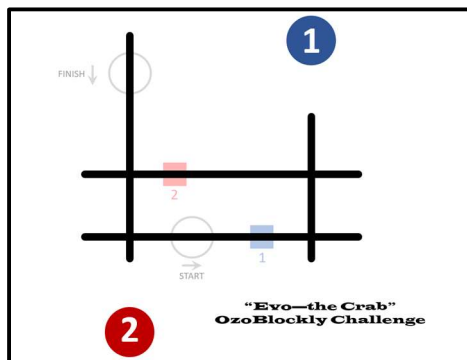


Figure 2

The left side of Figure 3 shows the position of Evo and the two cubes at the start. The right side of Figure 3 shows the position of Evo and the cubes at the finish.

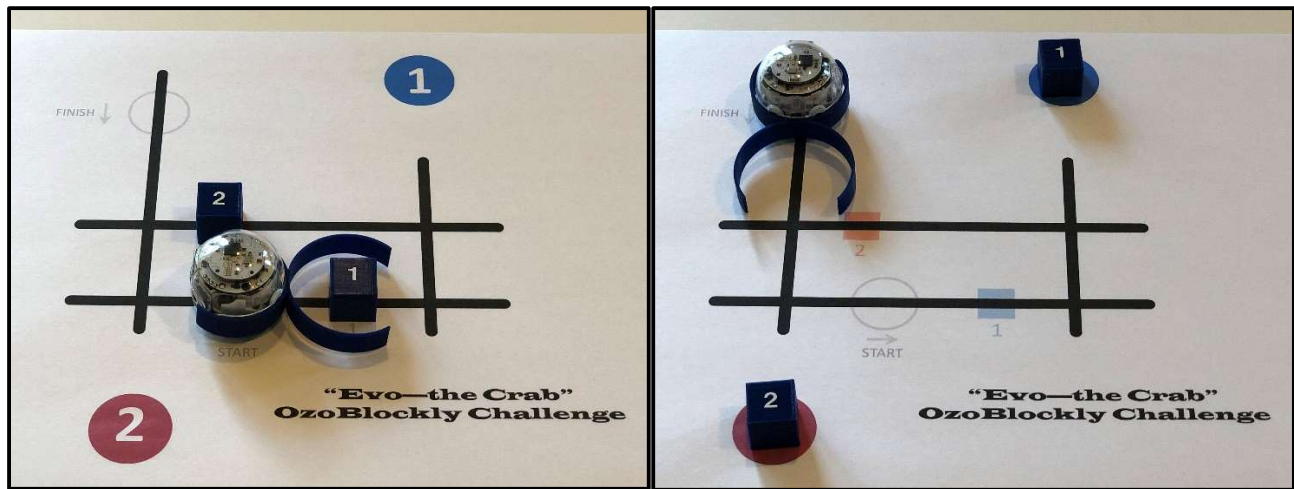


Figure 3

The main rule for this challenge is as follows. Evo should engage in **line following** whenever **possible**, and engage in **free movement only** when it is **necessary** to do so.

Turn on your thinking caps and get after it!