Let's put your new understanding of the brain to work! In the puzzle below, you'll play the role of the brain, coordinating the movement of a dancer. You'll use input in the form of Choreography Cards to learn the steps to a dance and then carefully Clipbot's direct movement on a Dance Floor Grid using the input.

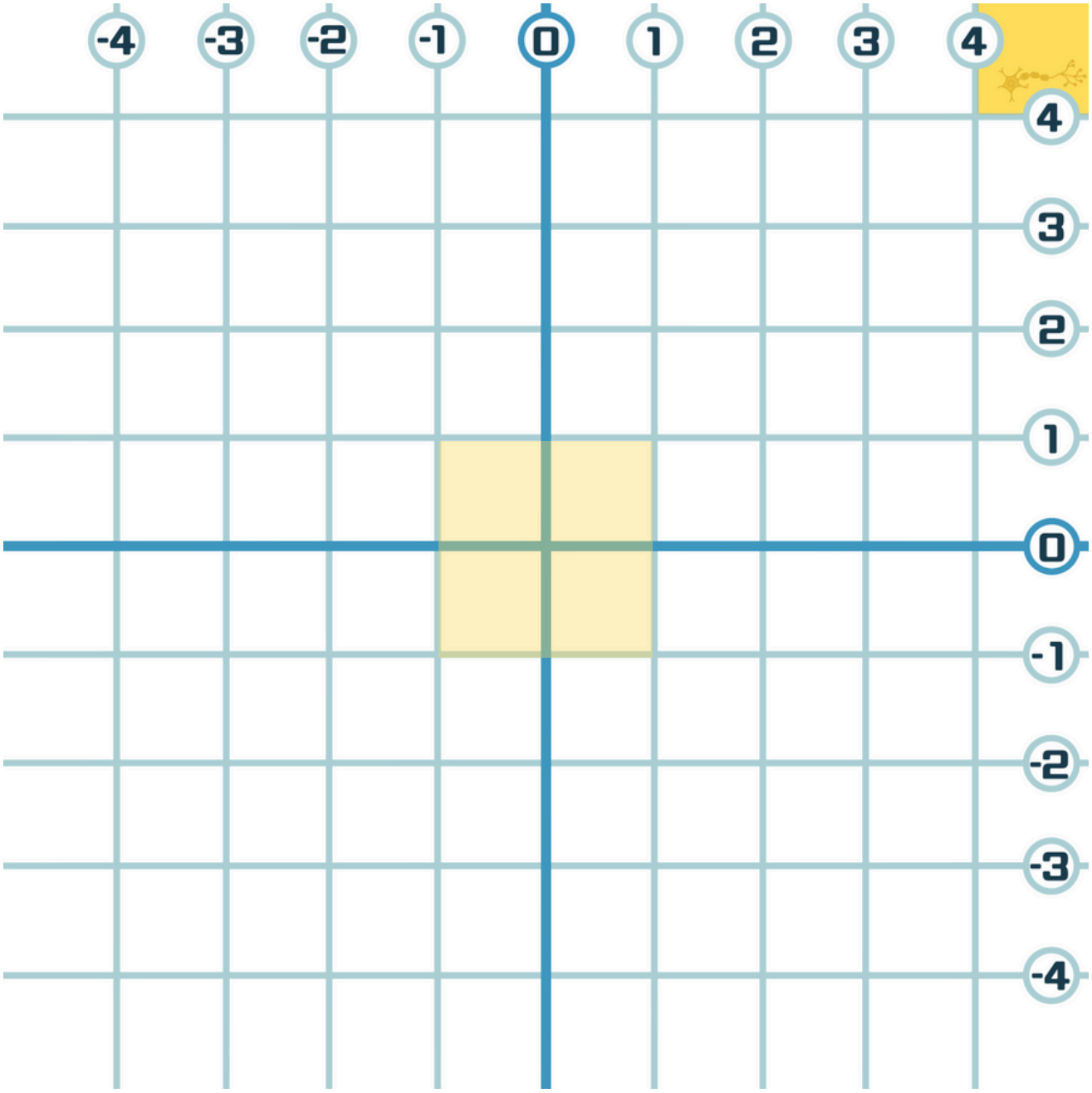
Print out your Dance Floor Grid on which ClipBot will move. It is set up as a coordinate plane with an x and y axis. You'll also need a small action figure like a LEGO mini-fig. If you don't have one, create your own by building a ClipBot using paperclips and other craft items. Finally you'll need the six choreography cards.

First, you will need to figure out the order of the steps to this dance. Each card shows a dance move. The order of the cards creates the choreography. When you place them in the correct order, your figure will start and end its dance in the center of the grid, on the yellow box. Note that when your dancer starts, it is facing forward toward the top of the grid. The way the figure is facing does matter for the puzzle.

Make sure each card is oriented so that the small yellow square is in the upper right corner, just like the grid. Also, pay attention to the orange "X" on each card, which represents the center of your dancer. That spot marks the coordinates, (x, y) on the grid associated with each card. As you move through the choreography, the coordinates associated with each card will reveal the secret code. (Too tough? Try the cards that have the numbers for the coordinates on them or use our dance diagram to see the choreography marked on the grid.)

Once you have the code, enter it into the Science Friday Enigma Machine to find out if you're right and get your digital badge. Use just the 12 digits; skip the parentheses, commas, minus signs, or spaces.

Print out a copy of this Dance Floor Grid. You will need to figure out the order of the steps to a dance using the attached Choreography Cards. Then, you need to move your dancer through that pattern on the grid below. You must start and end in the yellow square in the center. The coordinates from the grid will reveal the code.

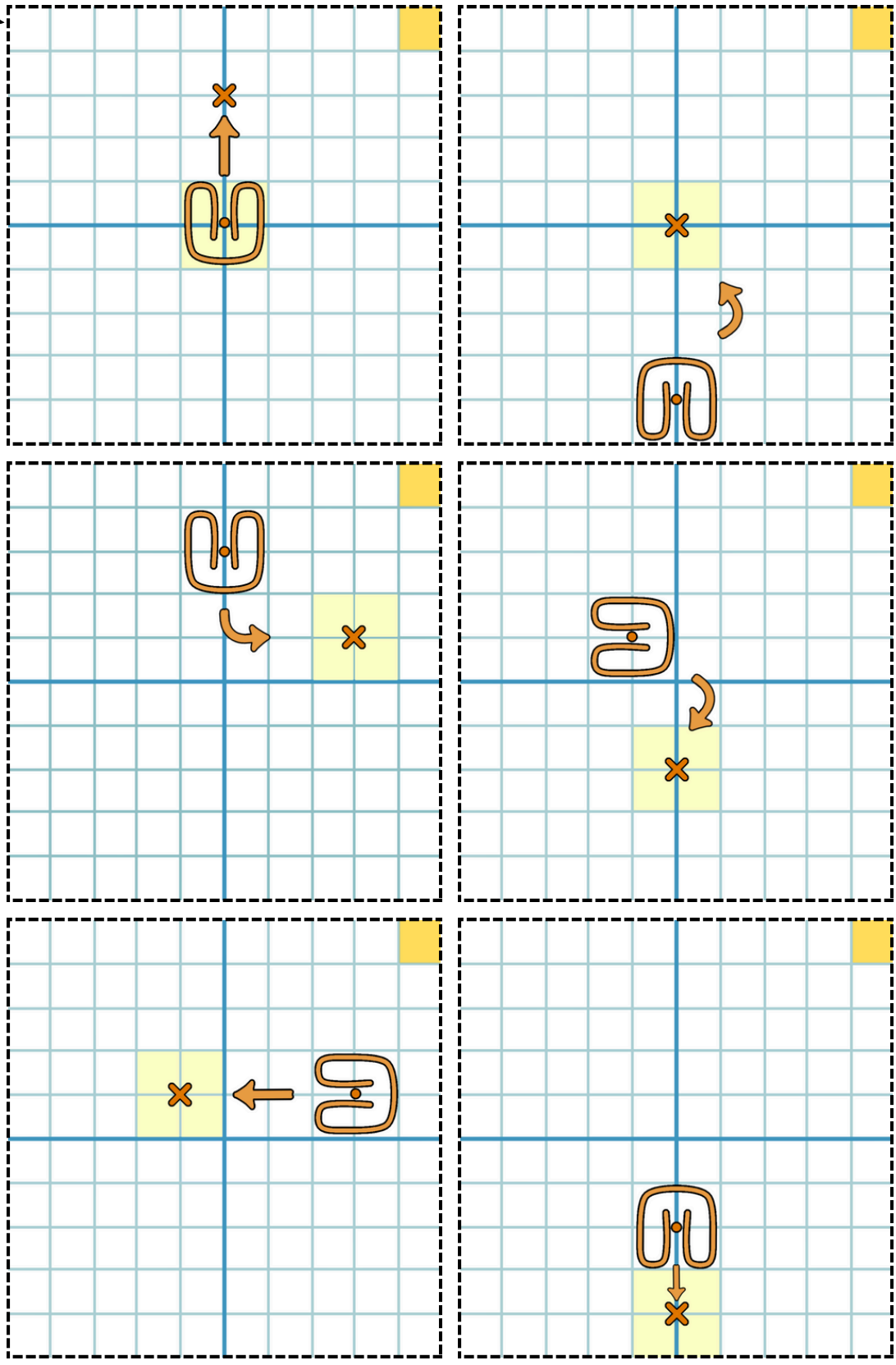





Submit code at https://bit.ly/HYBpuzzle1

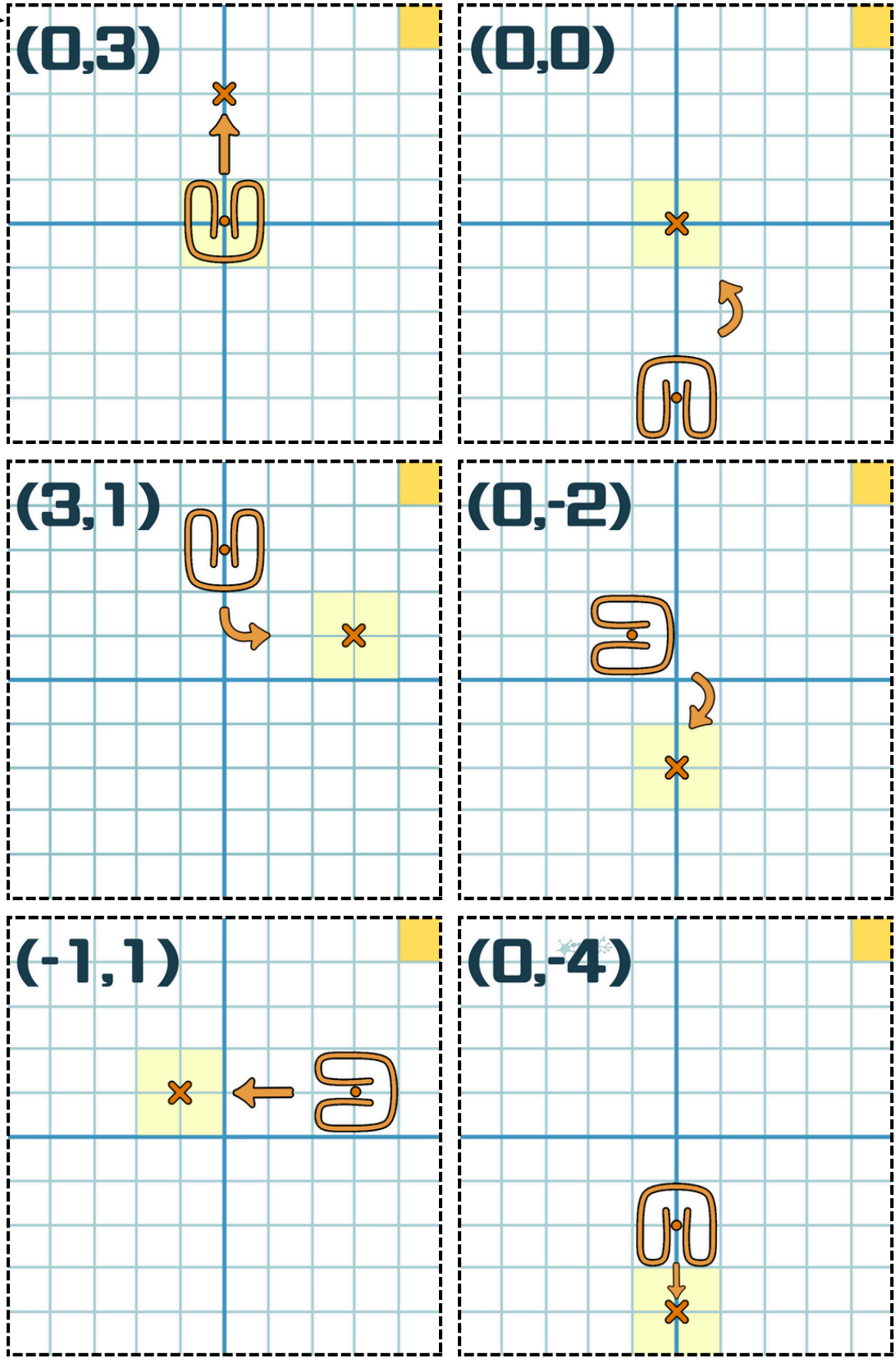
*For older learners.*

Print and cut out all six Choreography Cards.

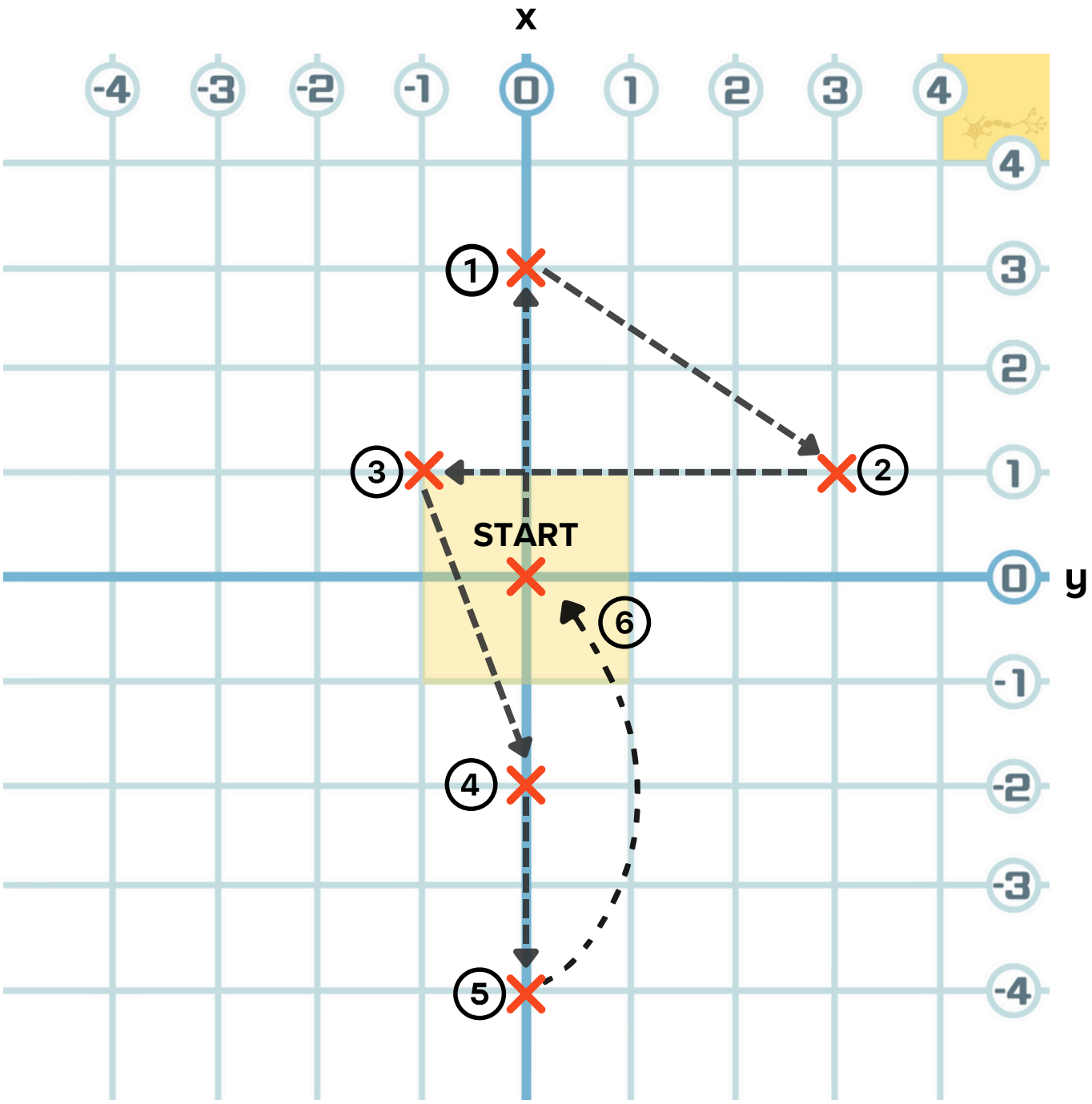


*For younger learners.*

Print and cut out all six Choreography Cards.



The dance diagram below shows the movement of your dancer across the grid. The orange X's represent the places where you need to record the coordinates, (x,y). So for example, once you place the cards in order, the first move is from (0,0) to (0,3).






Submit code at https://bit.ly/HYBpuzzle1