

**Note:** This is a 5x5 version of a Code.org Unplugged activity. For more on this activity and other activities that teach programming fundamentals away from the computer visit <https://code.org/curriculum/unplugged>.

## Algorithms

### Instructions:

Pair the students together. One student (Student A) is given an image with shaded blocks. The other student (Student B) is given the blank grid. Student B does not look at the image Student A is given. The students should follow the instructions below:

- Student A writes an algorithm that can be used to draw the image they are given with the programming language provided in the example below.
- Student A gives the algorithm to Student B.
- Student B uses the algorithm written by Student A to draw the image on the blank grid provided.

### Programming Language:

When Student B interprets the programming language, their pencil should start on the square that says "Start Here." The programming language is outlined below:

Move the pencil one place up:



Move the pencil one place to the right:



Move the pencil one place down:



Move the pencil one place to the left:

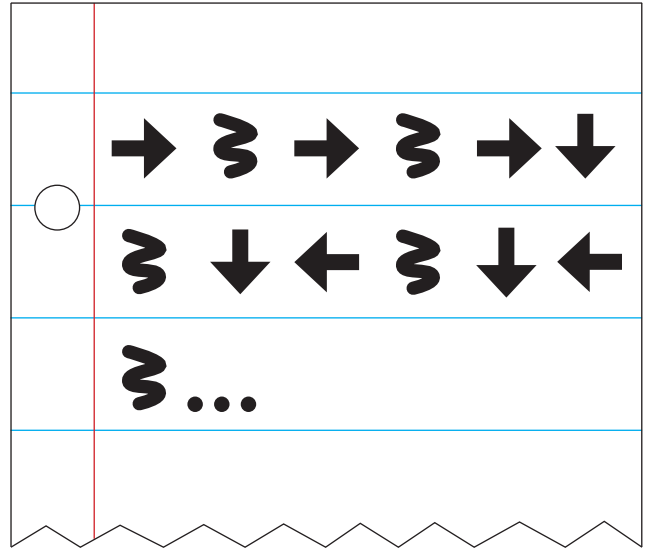
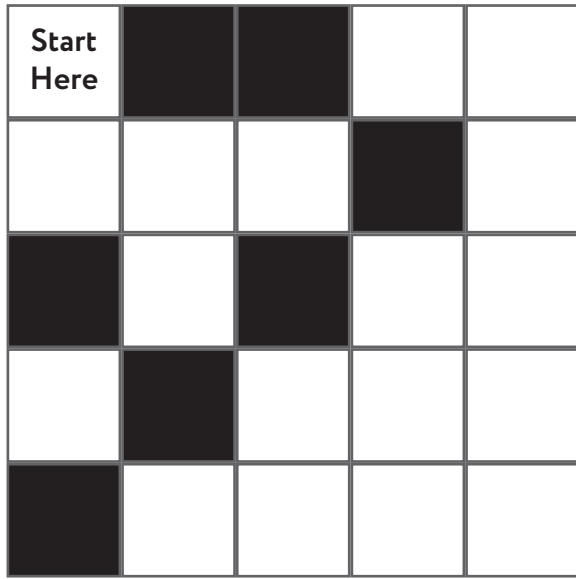


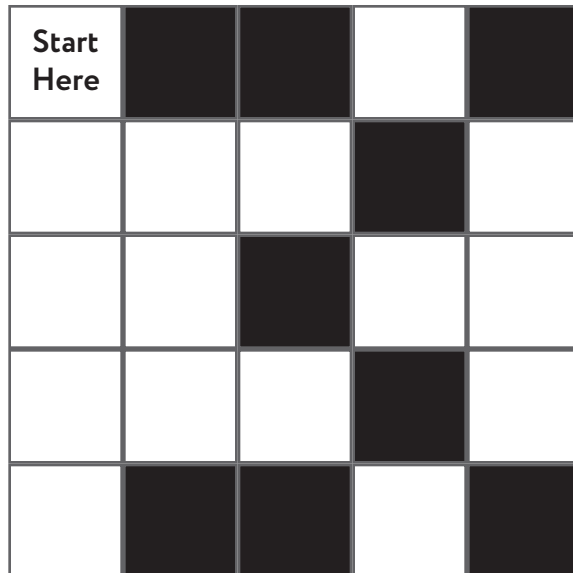
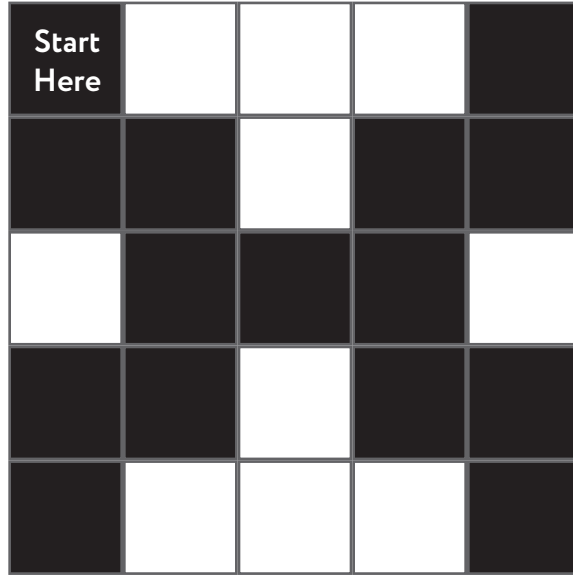
Shade in the block where the pencil is currently located:

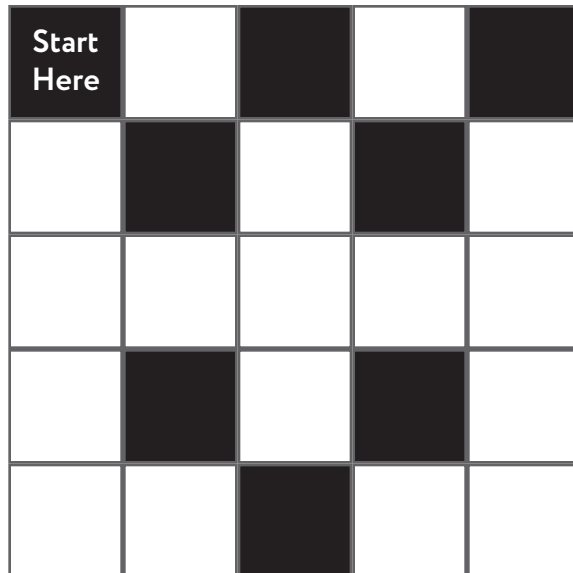
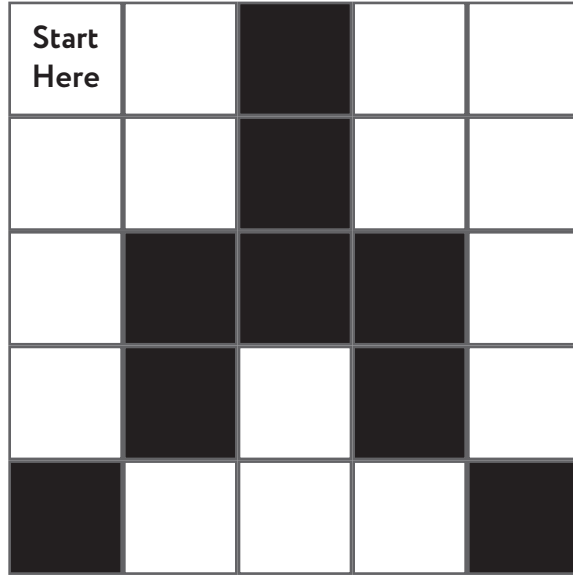


Example:

The program is written and read as standard English is written and read: from left to right, one line at a time.







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| Start Here |  |  |  |  |
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| <b>Start Here</b> |  |  |  |  |
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