e-book

Hamster Coding

Scratch 8

Written by ConceptOn

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How to Use

This manual is designed for the educational utilization of the Hamster robot.

· Please use this manual as on-screen instructions when teaching the Hamster class.

· The contents are easy to understand. Just read them before the class.

· Worksheets can be downloaded from the Robomation website.

· This manual can be used to ensure the best lesson plan.

· For more information, contact us at 7concepton@daum.net.

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Hamster Coding

Let's get started with Hamster coding with the Scratch program!

The use of the Scratch programs will make coding more interesting!

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Today's Activity

Division	Description	Time
Introduction	**Explore the problem.** Why not code for your Hamster to move on a game board?	5min
Development	**Find a solution.** Let's use the Move-On-Board and "hand found?" blocks. **Solve the problem.** Let's command your Hamster to move according to a given mission.	30min
Conclusion	**Review today's activities.** Let's talk about what you have learned and enjoyed.	5min

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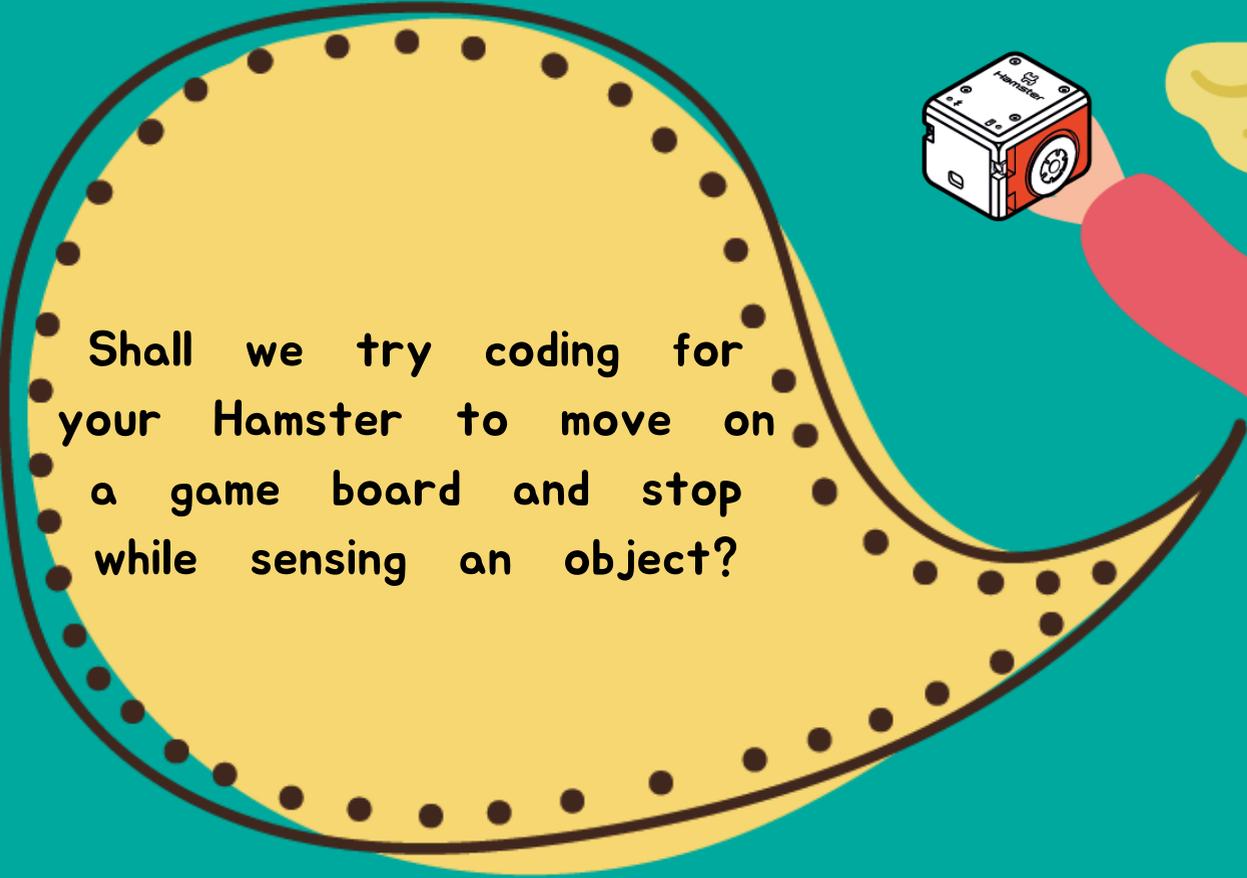
Shall we try coding for your Hamster to move on a game board and stop while sensing an object?

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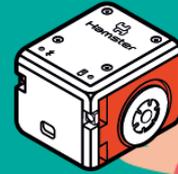
Get ready

First, let's find out what is needed for Hamster coding.

1 Hamster

2 Bluetooth Dongle

3 PC

4 Worksheet

5 Writing supplies (pen and paper)

6 Charging cable
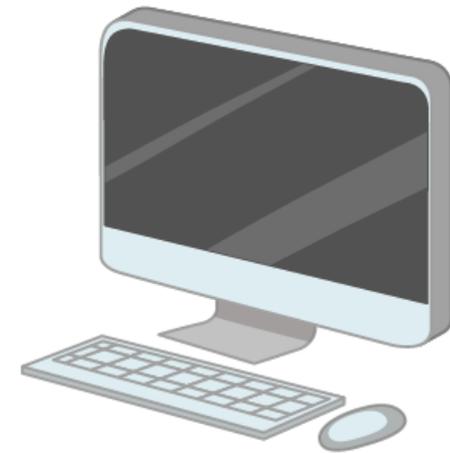
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Open the program

When opening the program, turn on Hamster and plug the Bluetooth Dongle into the USB port of your PC.

Open the program

1 Run the Robot Coding program.

2 Check if your Hamster robot is connected with the Bluetooth Dongle (through its LED light colors).

3 Click on Scratch 3 Offline.

4 Click on "Single Robot" and then "New File."

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Hamster moves on a game board

The game board has horizontal and vertical black lines that intersect to form multiple cells!

One cell refers to the section from an intersecting point to another one.

One cell

One cell

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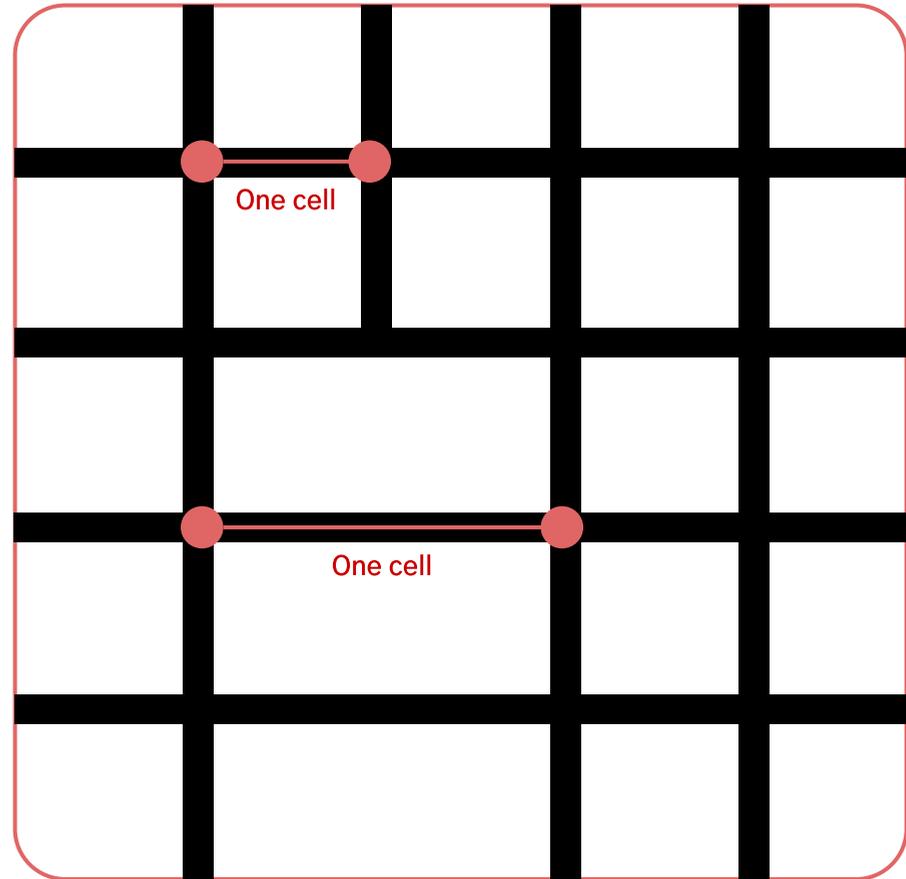
Move and rotate on the board

Let's find the block that lets your Hamster move on the board.

The starting point is the intersecting point of two black lines, where the center of your Hamster should be aligned.

Start

Code hints

move forward once on board

turn left once on board

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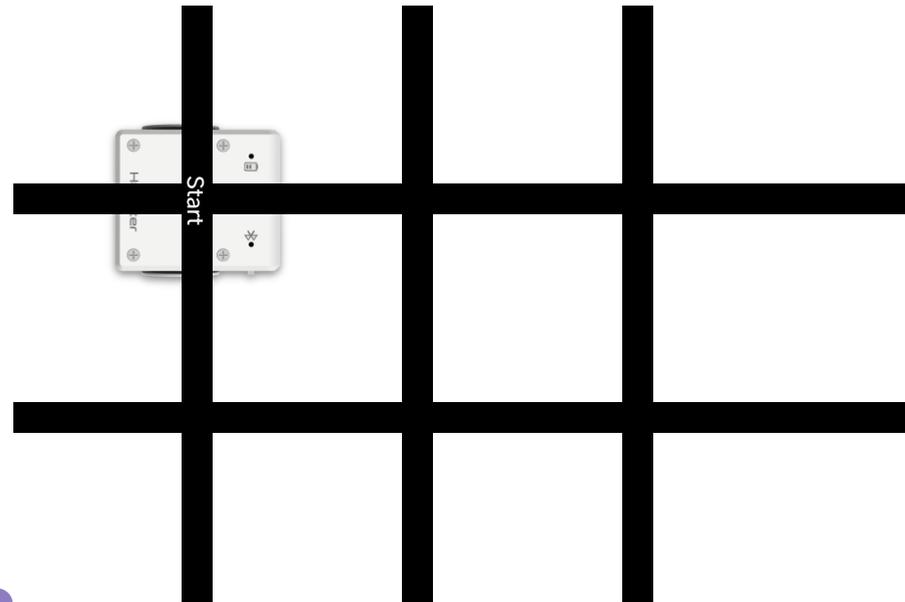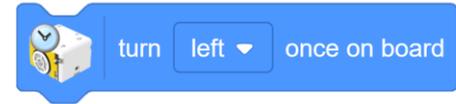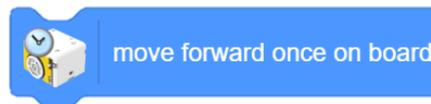
Exercise 1

Let's code for your Hamster to move on the board.

Preparations: Hamster, Worksheet (game board)
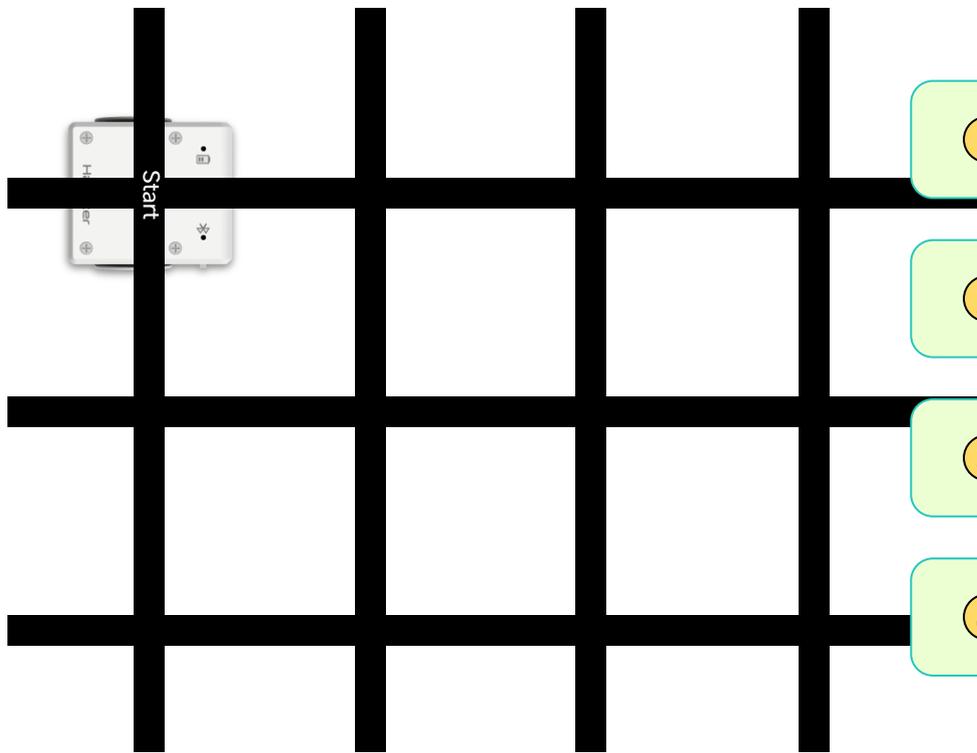
1. Move forward one cell on the board

2. Left rotate once on the board

3. Right rotate once on the board

4. Move forward two cells on the board

* Why not code with more command statements?

Exercise 2

Let's code for your Hamster to move on the board.

Preparations: Hamster, Worksheet (game board)

Write the code while thinking about the order of blocks

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Exercise 3

Let's code for your Hamster to move on the board.

Preparations: Hamster, Worksheet (game board)

Write the code while thinking about the order of blocks

Exercise 4

Let's code for your Hamster to move on the board.

Preparations: Hamster, Worksheet (game board)

Arrival

Start

Write the code while thinking
about the order of blocks

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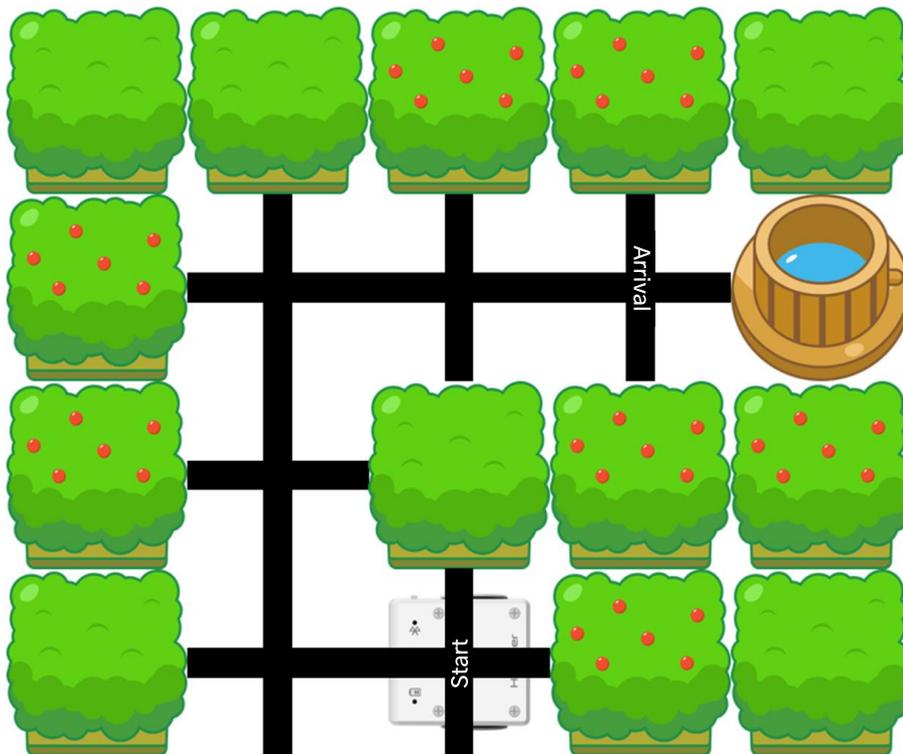
Exercise 5

Let's code for your Hamster to move on the board.

Preparations: Hamster, Worksheet (game board)

Start

Arrival
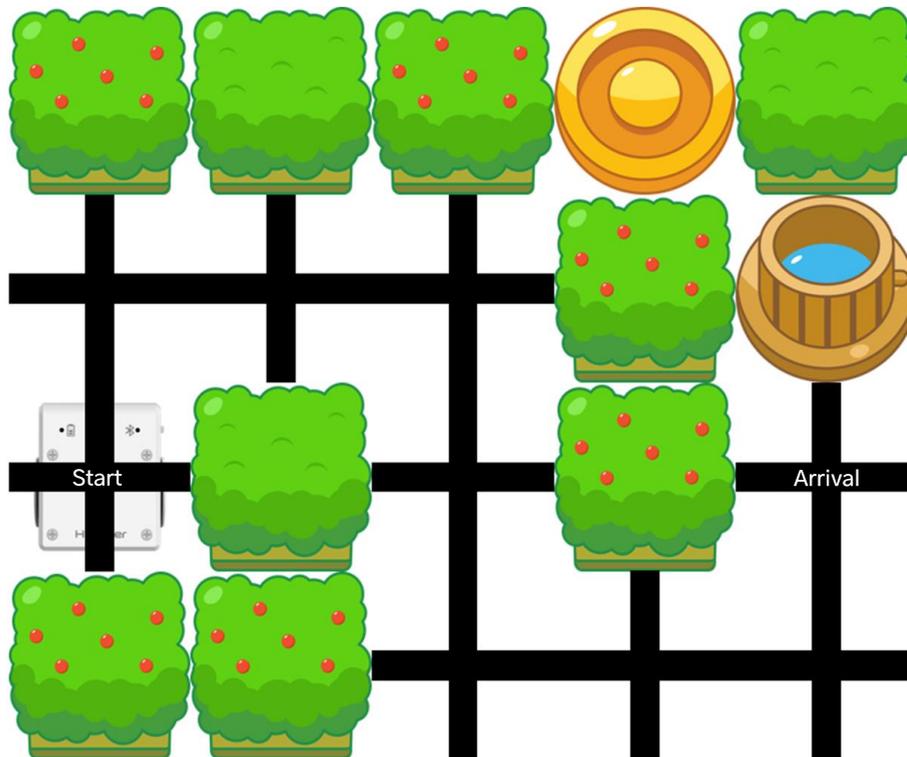
Write the code while thinking about the order of blocks

Exercise 6

Let's code for your Hamster to move on the board.

Preparations: Hamster, Worksheet (game board)

Start

Arrival
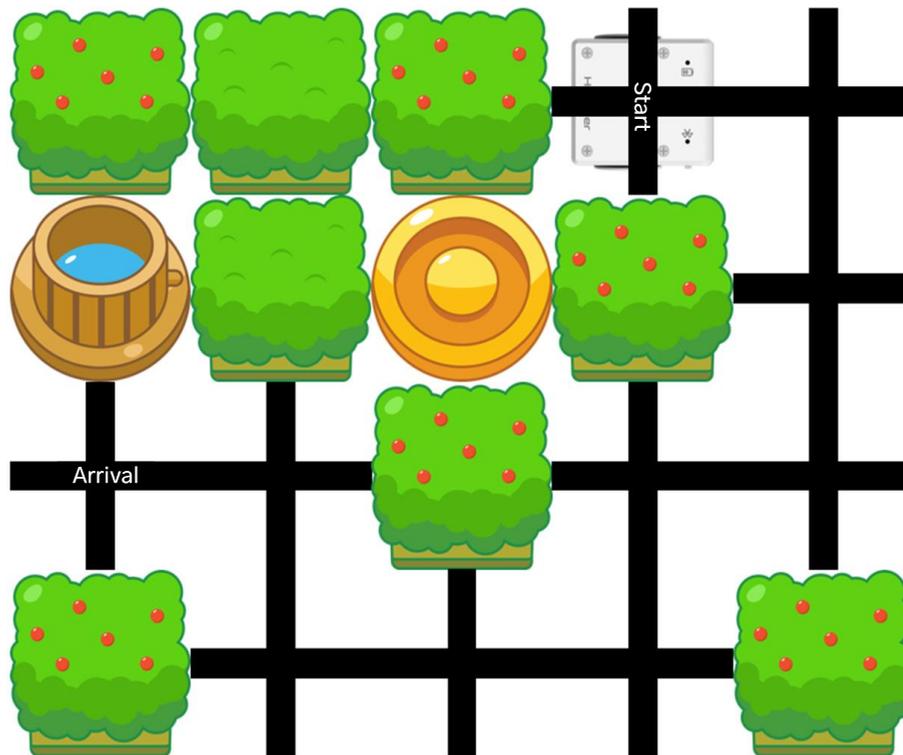
Write the code while thinking about the order of blocks

Coding with your partner

Let's code for your Hamster to move on the board.

Preparations: Hamster, Worksheet (game board)

Activity examples

① Give problems to each other (setting the starting and arriving locations of Hamster).

② Organize the order of blocks and try coding.

③ Team up with your partner to compete with other teams.

Let's increase the levels of difficulty of problems to be challenged!

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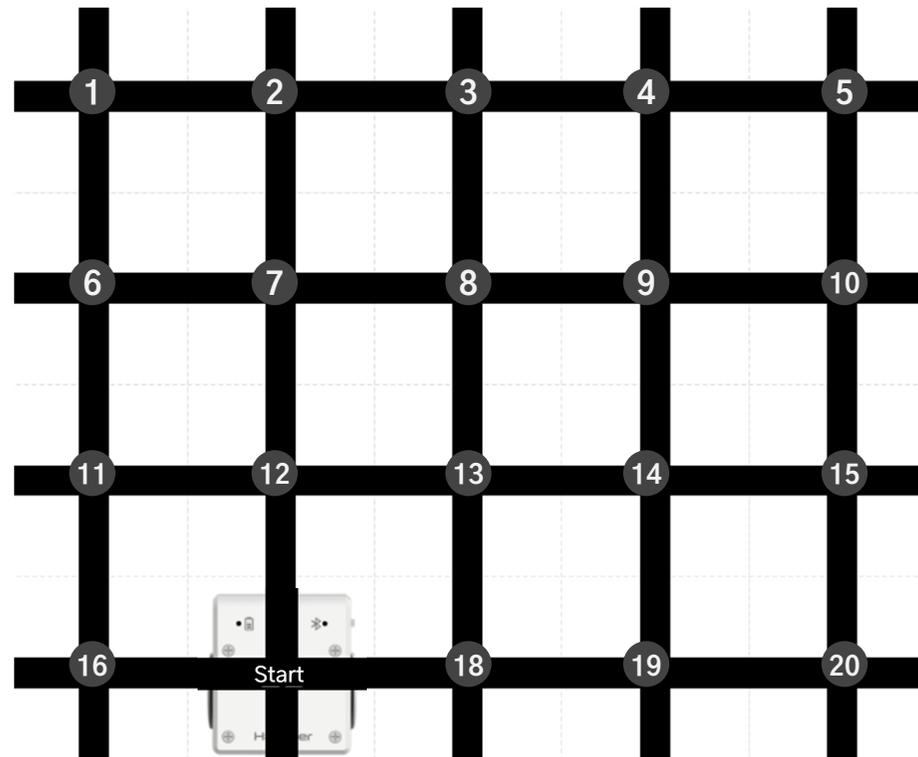
Let's Review

😛 What did you learn today?

😅 Did you encounter any difficulties?

😍 What interested you the most about Hamster robot?

See you again!

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