Turn Robot
Assembly Instructions

Turn Robot

Components

Studuino Unit

Battery Box ×1

USB Cable ×1
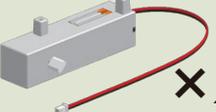
DC Motor ×2

Sensor Connecting Cable (three-wire 15 cm) ×2
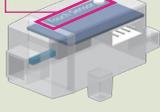
Touch Sensor
Touch Sensor ×2

Basic Cube (white) ×2

Triangle A (gray) ×4
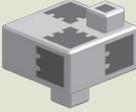
Half A (light gray) ×2

Half B (blue) ×6

Half C (light aqua) ×11

Half D (aqua) ×2

Hub ×2

Wheel ×2

O-ring ×2

Disk ×2

Assembly Instruction Labels

x 1

Shows the parts needed for assembly. Indicates the number of parts needed for assembly.

Indicates when the direction of a component must be changed for assembly.

Turn Robot

Assembling the Motor
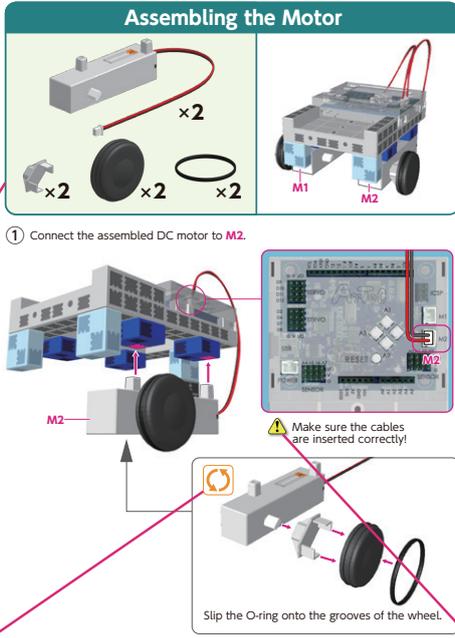
×2

×2 ×2 ×2

M1 M2

① Connect the assembled DC motor to **M2**.

M2

⚠ Make sure the cables are inserted correctly!

M2

Slip the O-ring onto the grooves of the wheel.

04

Shows an image of the completely assembled item.

Indicates tips or warnings when building a specific item.

Turn Robot

Assembling the Body (bottom)

×1

×4   ×3   ×1
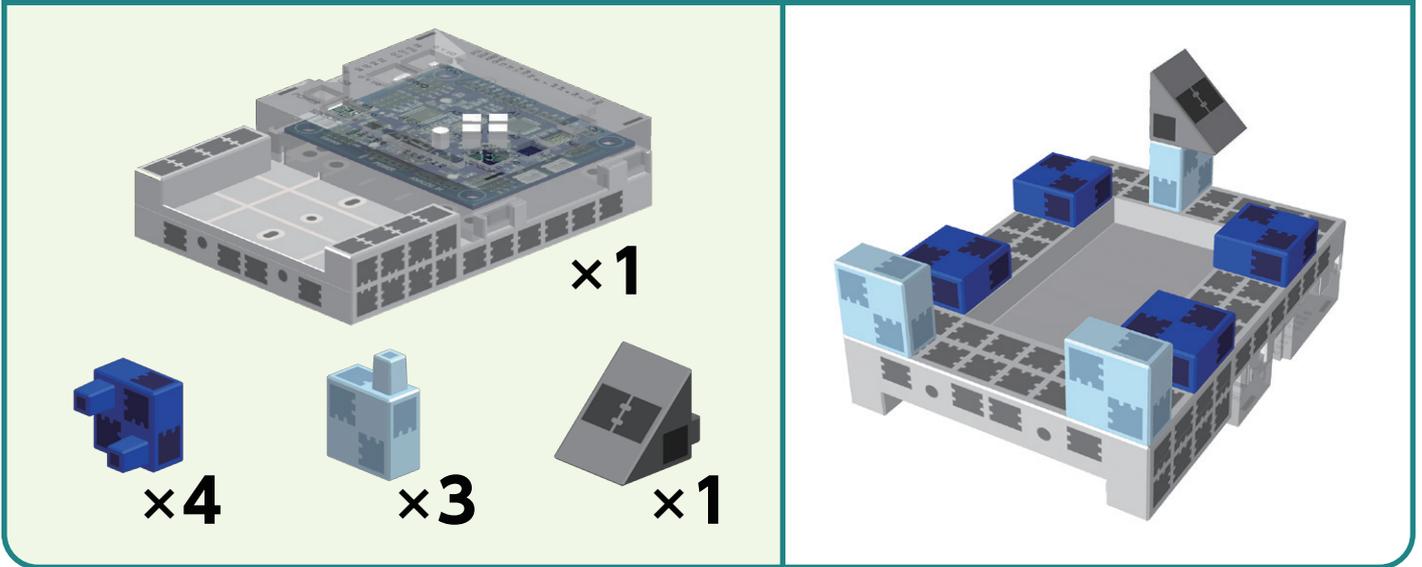
①
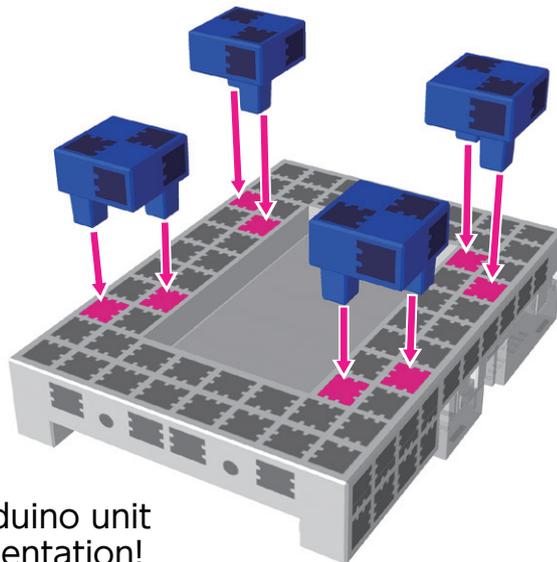
⚠ Make sure the Studuino unit is in the correct orientation!

②

Turn Robot

Assembling the Motor

×2

×2 ×2 ×2

M1
M2

① Connect the assembled DC motor to **M2**.

M2

Make sure the cables are inserted correctly!

Slip the O-ring onto the grooves of the wheel.
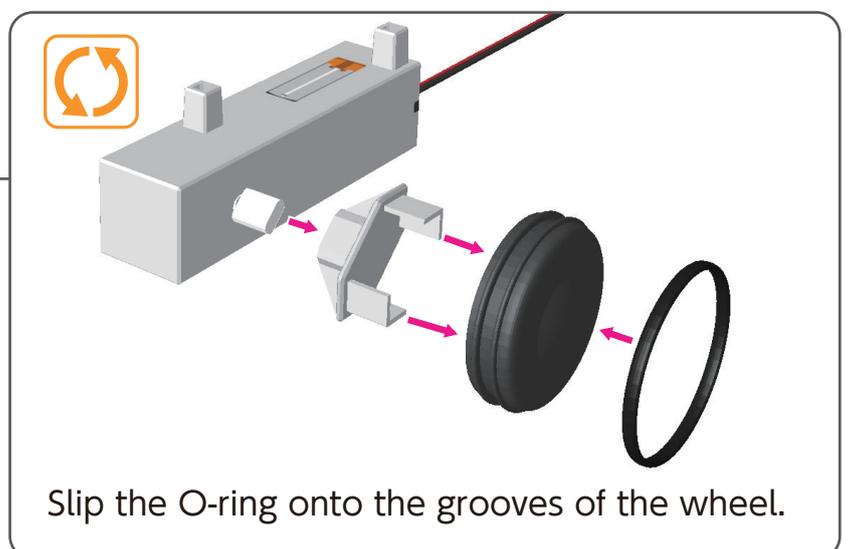
Turn Robot

② Connect the assembled DC motor to **M1**.

Make sure the cables are inserted correctly!

Slip the O-ring onto the grooves of the wheel.

M1

Completed Motor

M1

M2
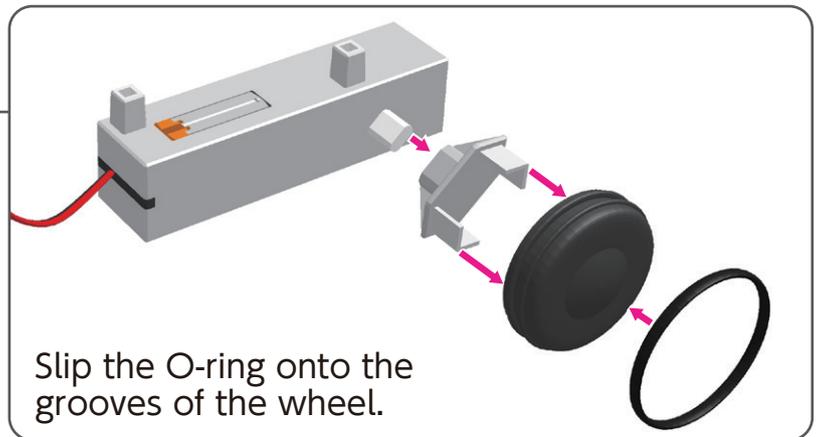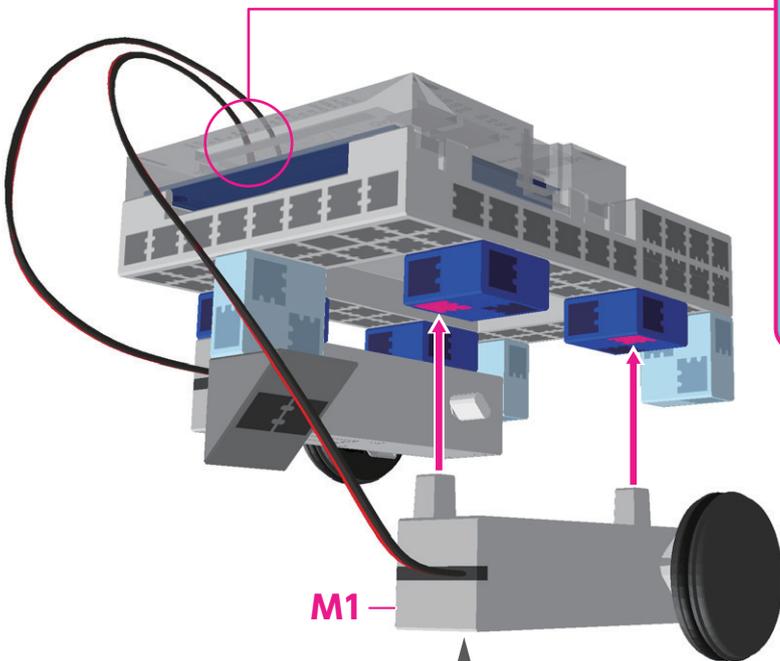
Turn Robot

Assembling the Body (front)

×1   ×2

×2   ×2

×8   ×1

①
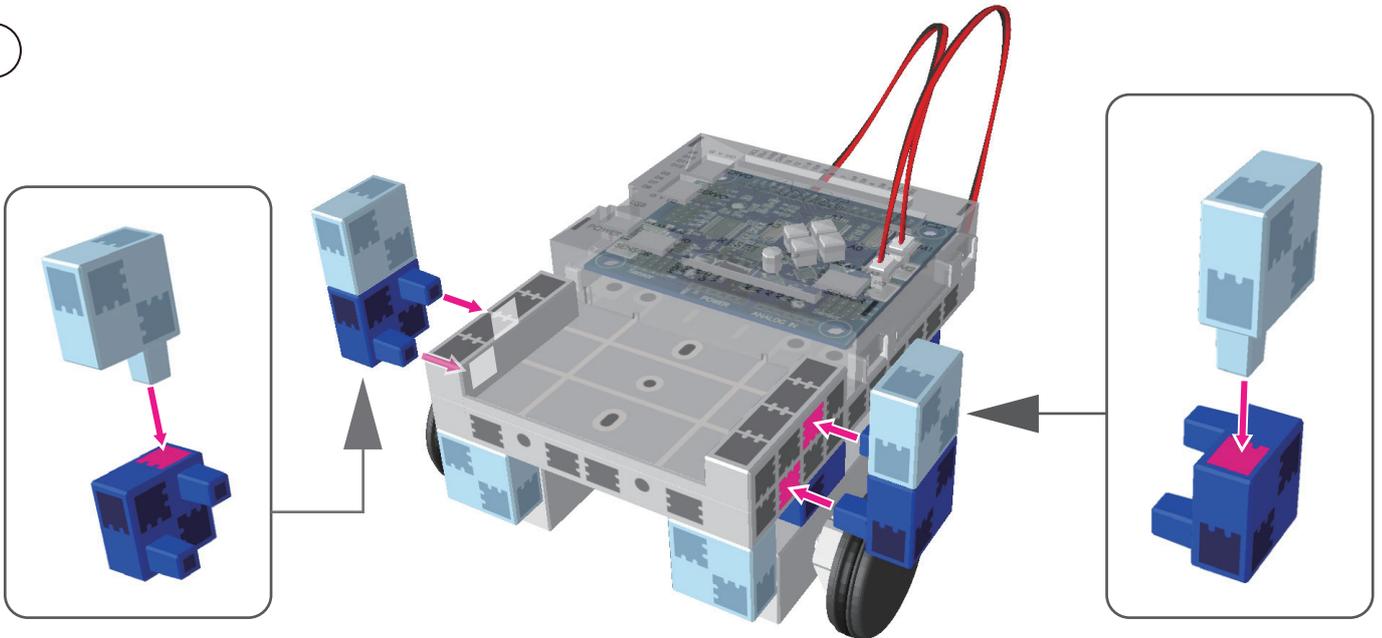
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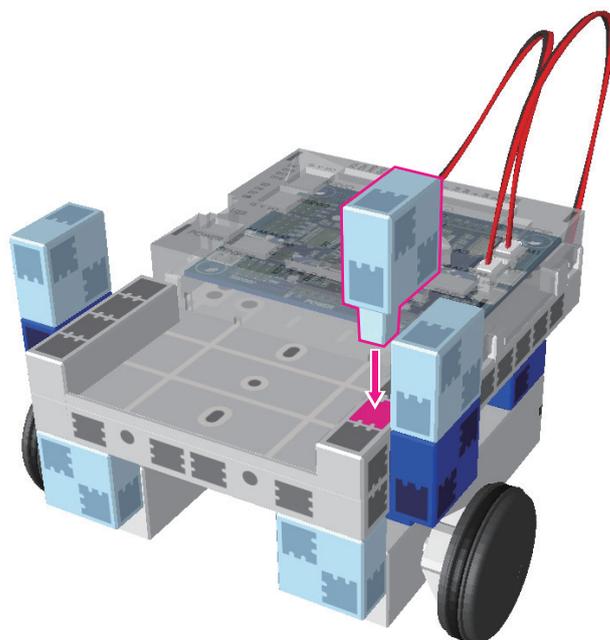
Turn Robot

③
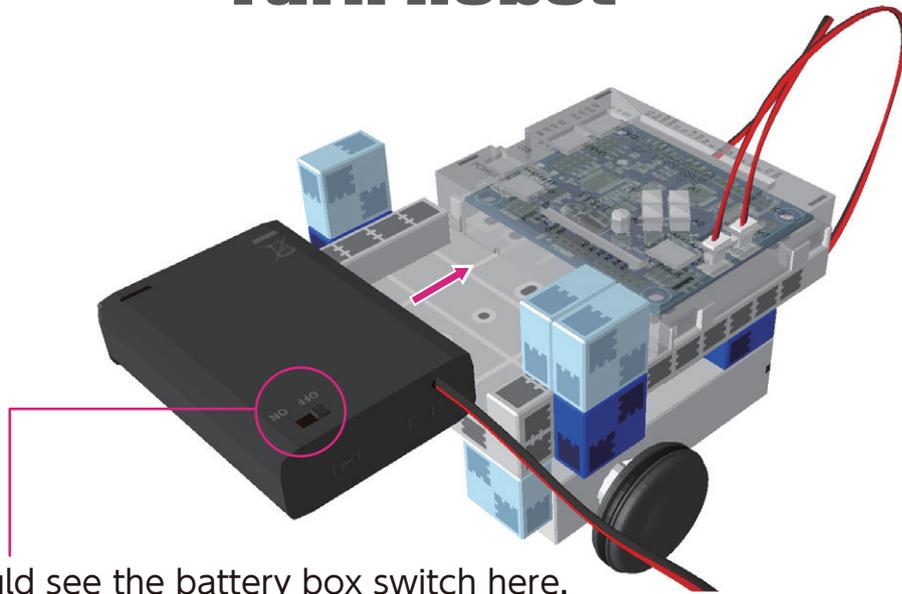
⚠ You should see the battery box switch here.

④ Connect the cables from the battery box to the **POWER** section.

POWER
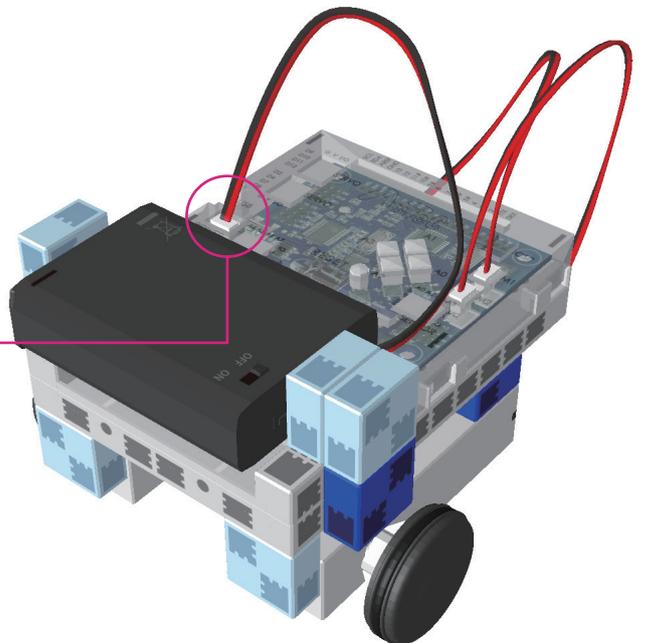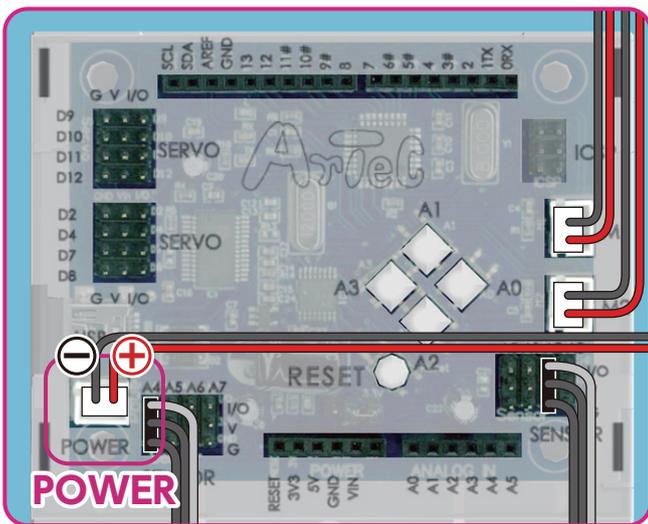
⑤
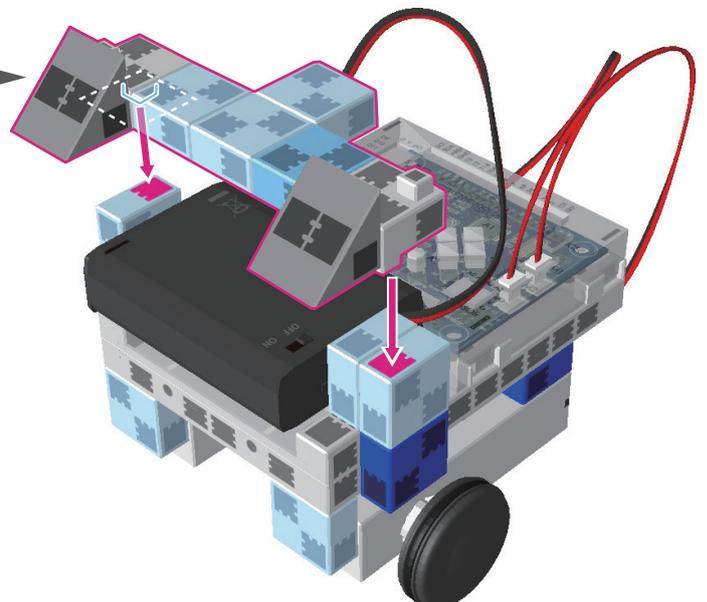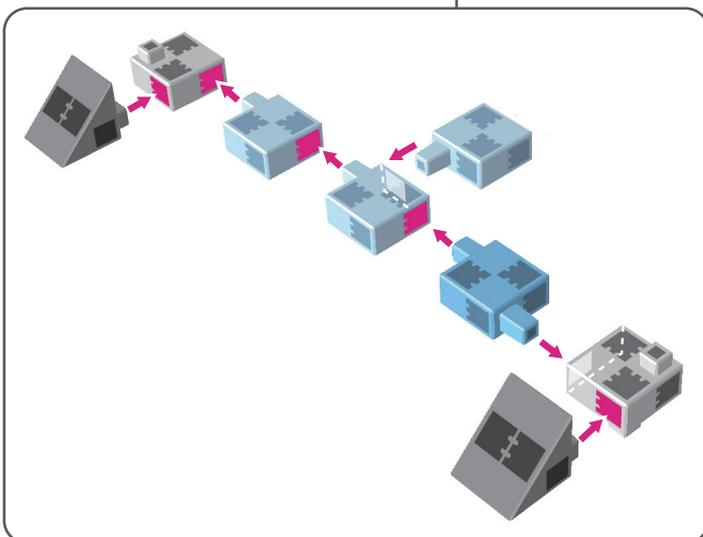
Turn Robot

⑥
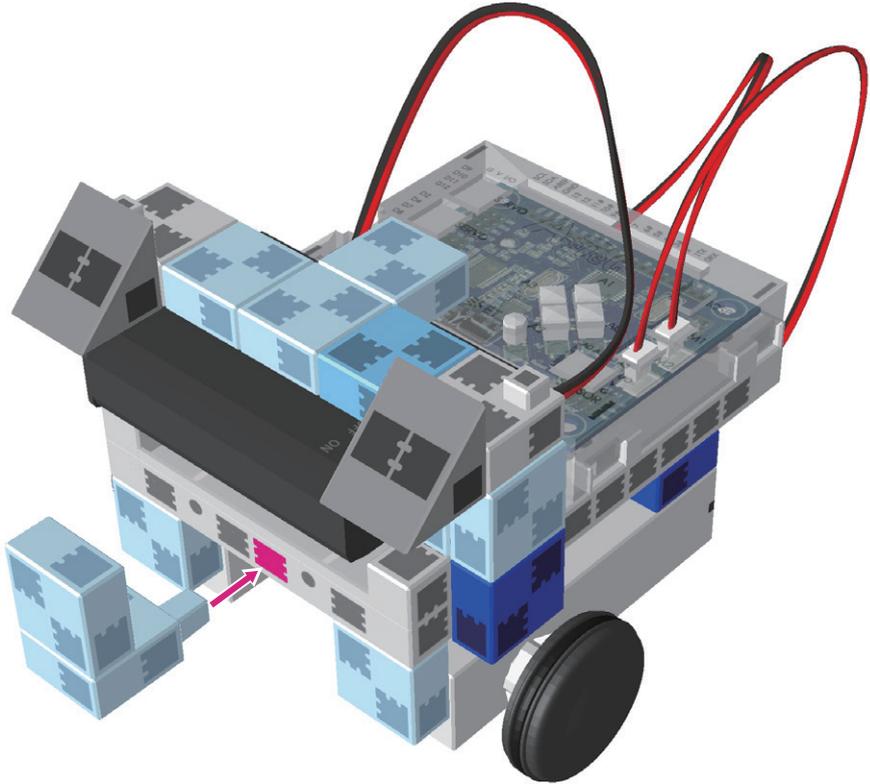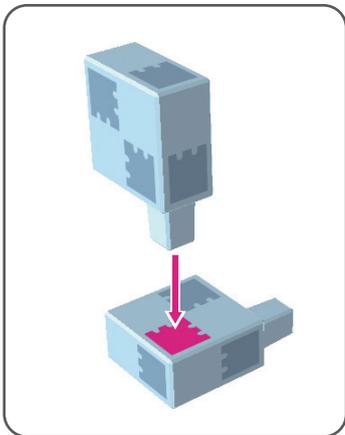
Completed Body (front)
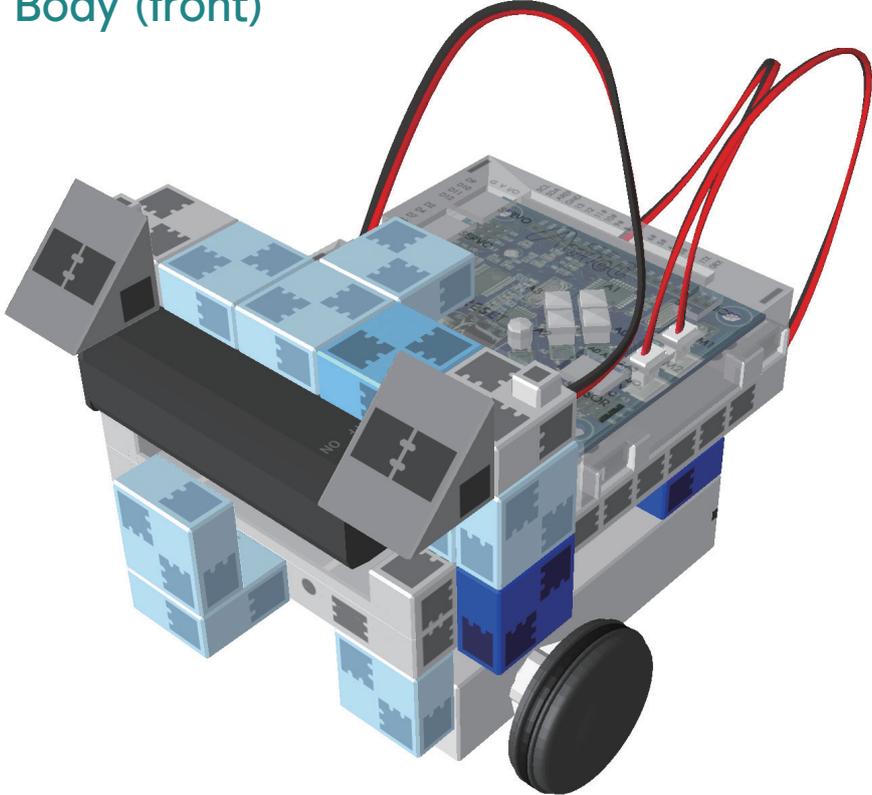
Turn Robot

Assembling the Touch Sensor

×2   ×2
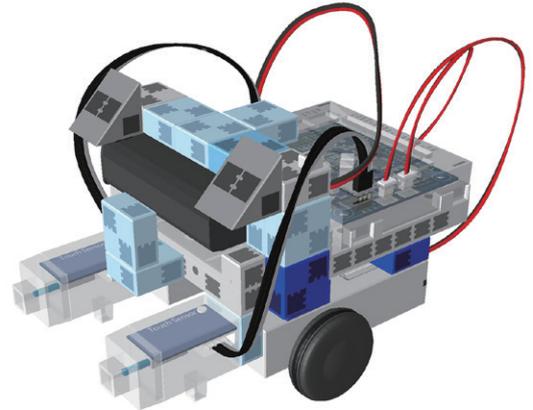
① Connect the touch sensor to **A4**.
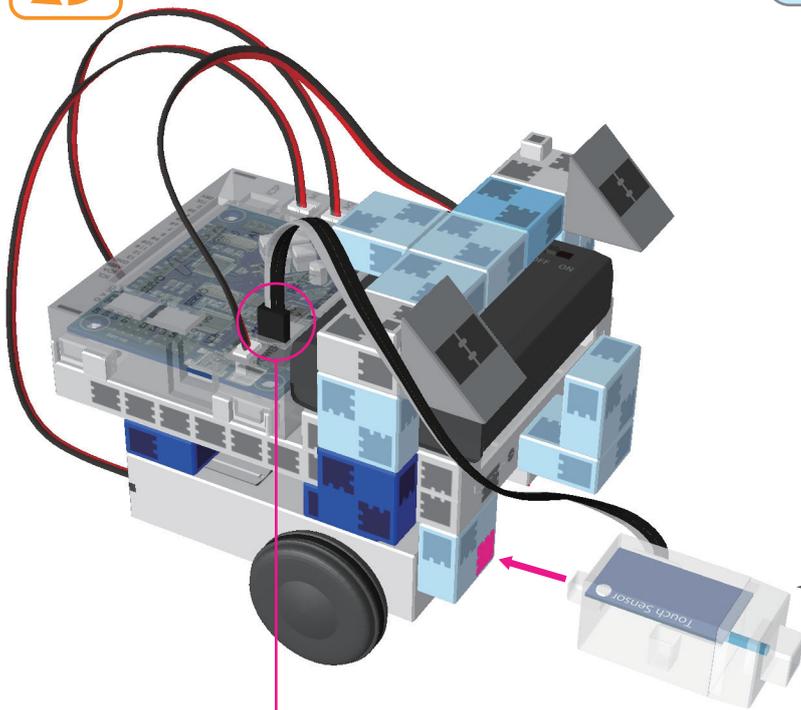
Sensor Connecting Cable

Sensor side   Circuit board side

Touch Sensor

Gray

Black

⚠️ Make sure the cables are inserted correctly!

A4
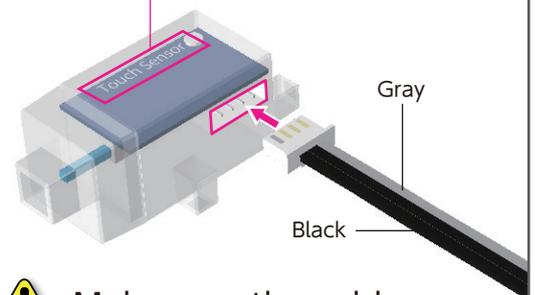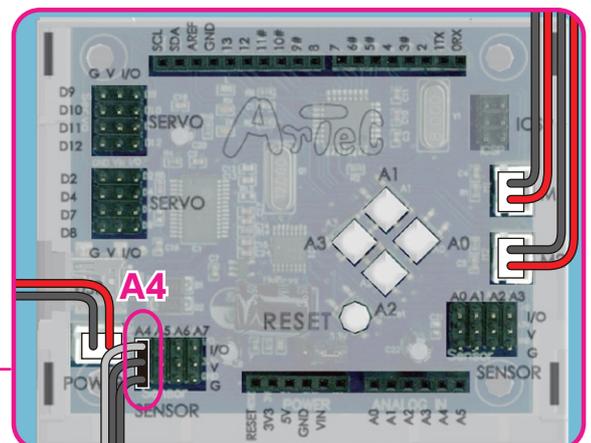
⚠️ Make sure the cables are inserted correctly!

Turn Robot

① Connect the touch sensor to **A3**.

Touch Sensor

Gray

Black

⚠ Make sure the cables are inserted correctly!

SCL SDA AREF GND 13 12 11# 10# 9# 8 7 6# 5# 4 3# 2 1TX 0RX

D9
D10
D11
D12
SERVO

ArTeC

D2
D4
D7
D8
SERVO

A1

A3   A0

A4 A5 A6 A7

A2

RESET

A0 A1 A2 A3

I/O
V
G

A3

POW

SENSOR

RESET 3V3 5V GND VIN   A0 A1 A2 A3 A4 A5
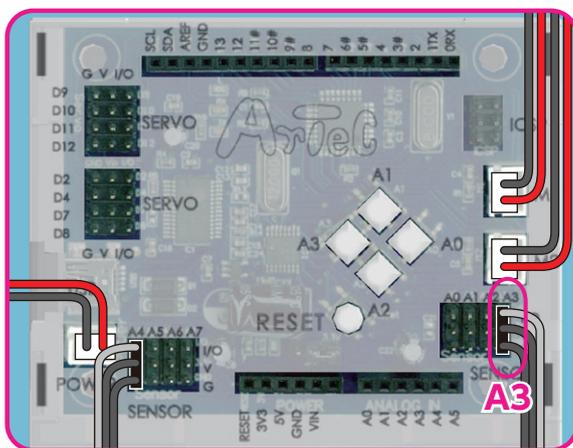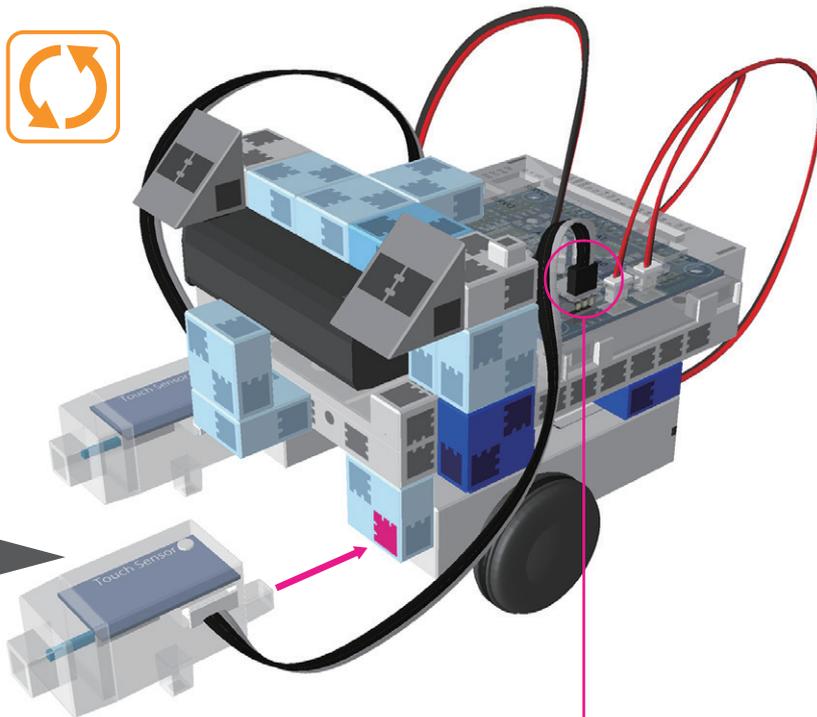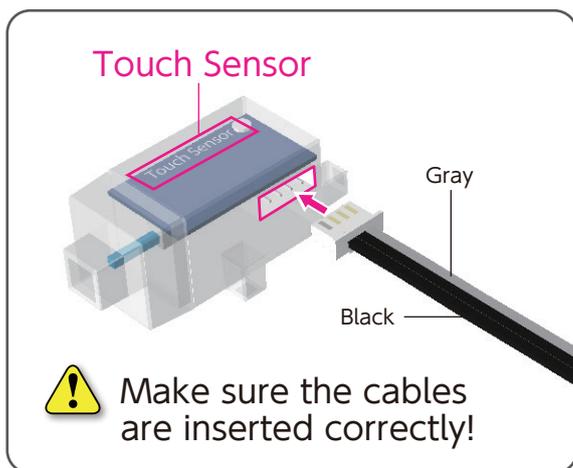
⚠ Make sure the cables are inserted correctly!

Completed Body (front)

⚠ Make sure the sensor cables are on the sides of the car body.
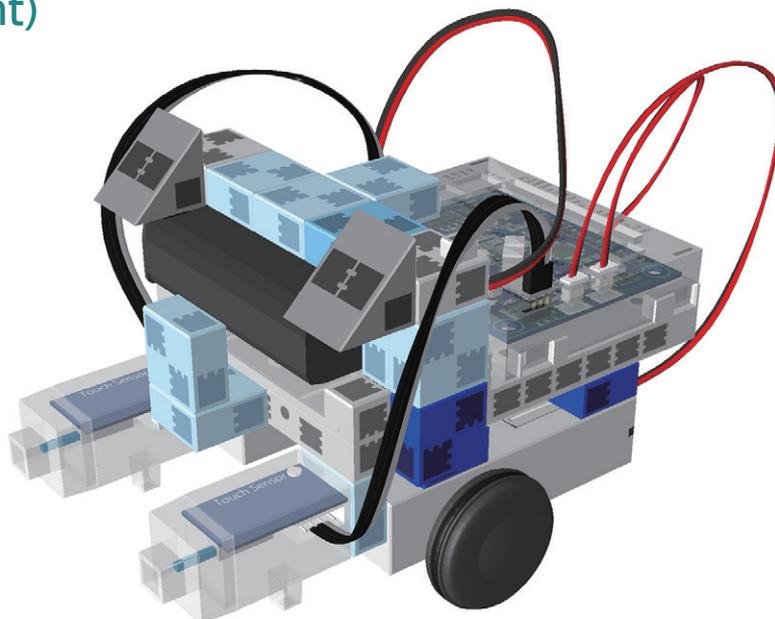
Turn Robot

Assembling the Head

×2   ×1

×2   ×1
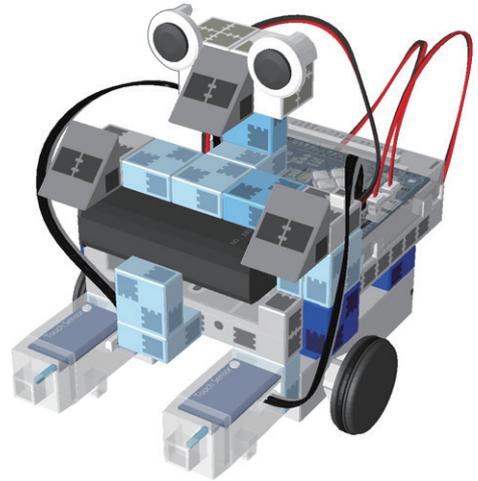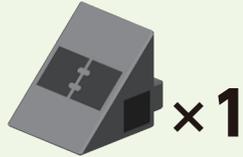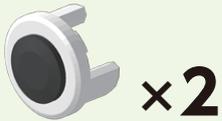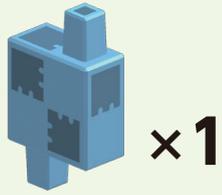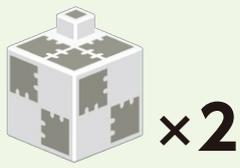
1. ⚠ Attach first.

2.
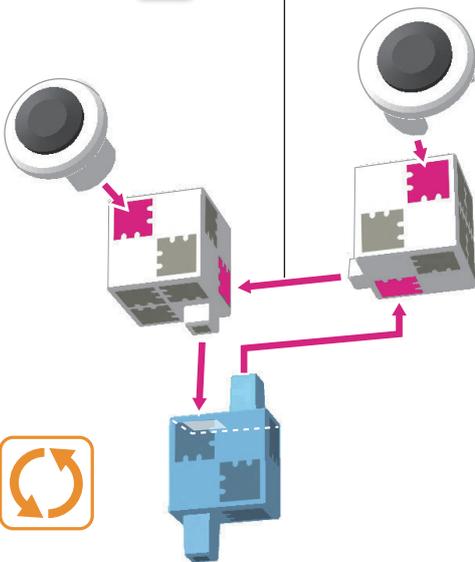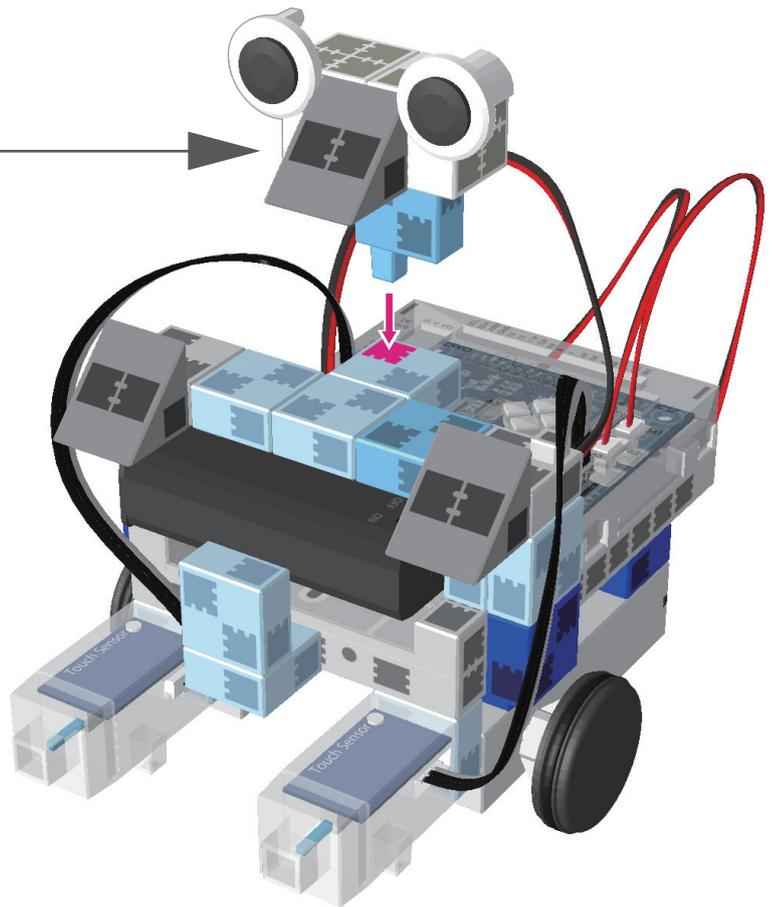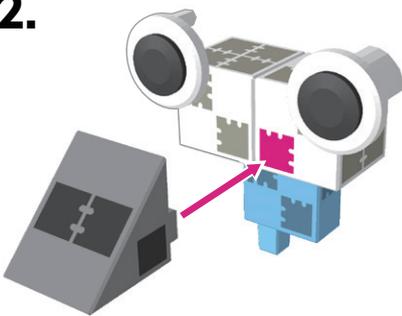
Turn Robot

①
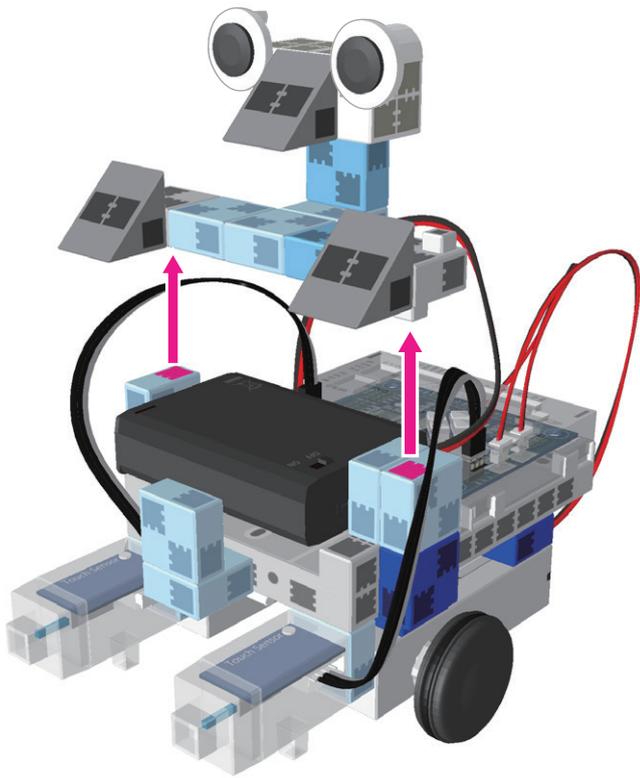
②
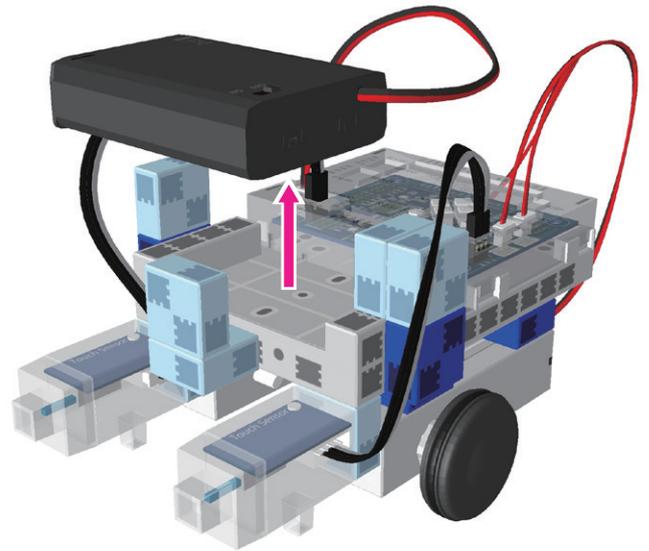
③
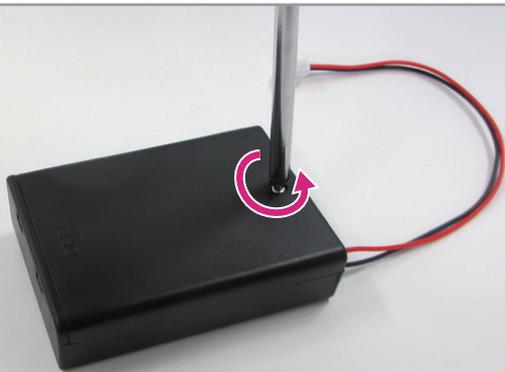
④
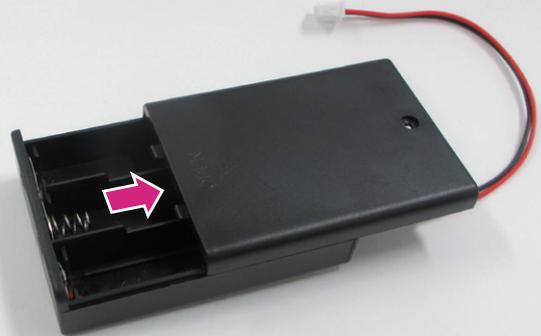
⑤
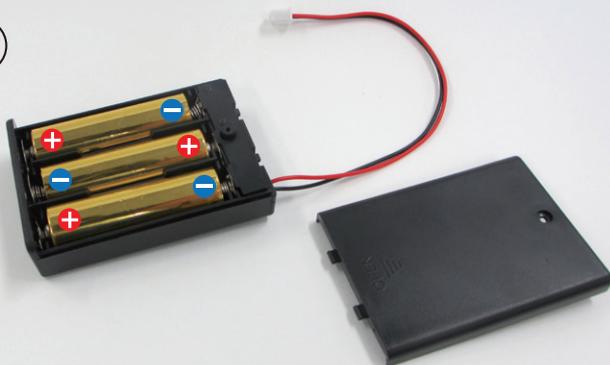
Use a screwdriver (Phillips #1) to open.

⚠ Insert batteries in the correct polarity.

Put the lid of the battery box back in place.

Turn Robot

> ⚠️ Watch for any cables that could become entangled in the moving parts of the motor and disconnect.
> Arrange cables with caution.
> ⚠️ Before operating your robot, check the Assembly Instructions again to confirm your robot has been assembled correctly.

Front
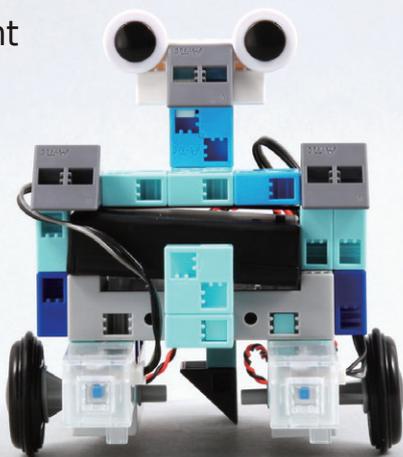
Left
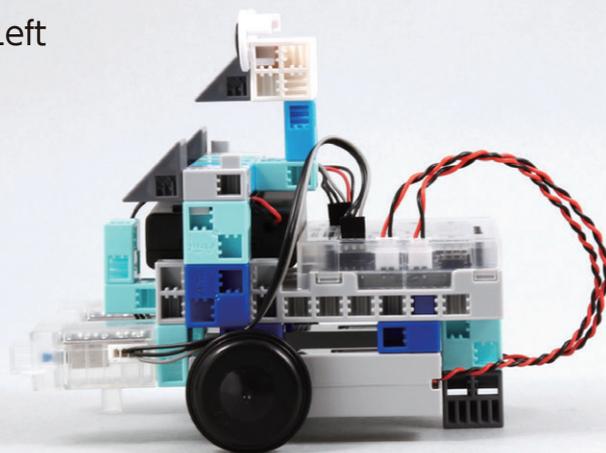
Rear
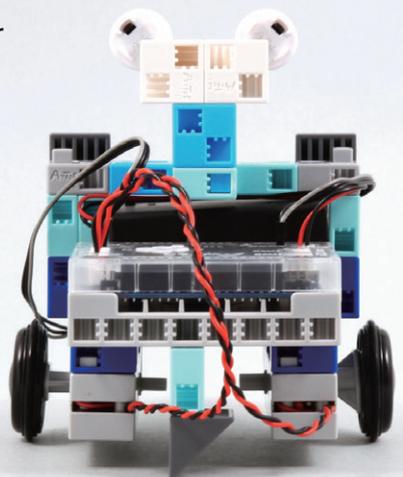
Right
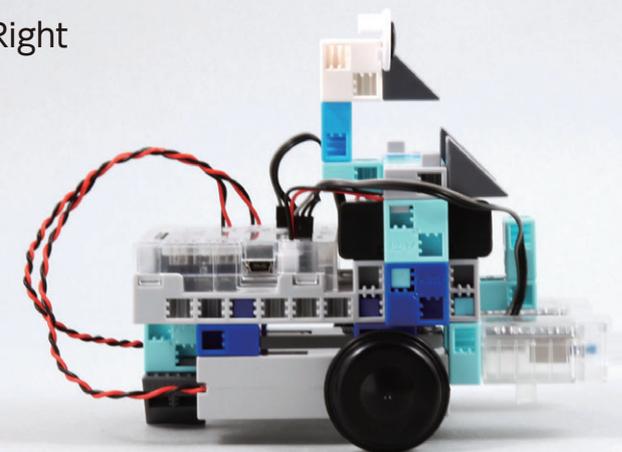
Turn Robot

Operating Your Turn Robot

Install the software from the URL below to setup
the **Studuino Programming Environment.**

★ Proceed to Step 1 when software installation is complete.

http://www.artec-kk.co.jp/studuino/

① Connect the USB cable to the PC and the Studuino unit.
Refer to **1.3. About Studuino** in the **Studuino Programming Environment Manual** for more details.

② Download the program file **TurnRobot.ipd** from the URL below in the **ArtecRobo** section.

http://www.artec-kk.co.jp/artecrobo/

③ Open the downloaded file.

④ Transfer the program to the Studuino unit by clicking the Transfer button 🔽.

⑤ Remove the USB cable from the Studuino unit.

⑥ Turn the switch of the battery box on.

⑦ Your robot will use its touch sensor when it bumps into a wall or object.
It will move back a little and move around the object.