

Book 1
Let's get
moving



Welcome to Book 1 – Let's get moving

Stick a yellow L plate onto your robot.

You are working in teams of 2 and your teacher will allocate you a marking partner(mentor).

Let's get started....enjoy the ride.

Challenge 1 - Pivoting

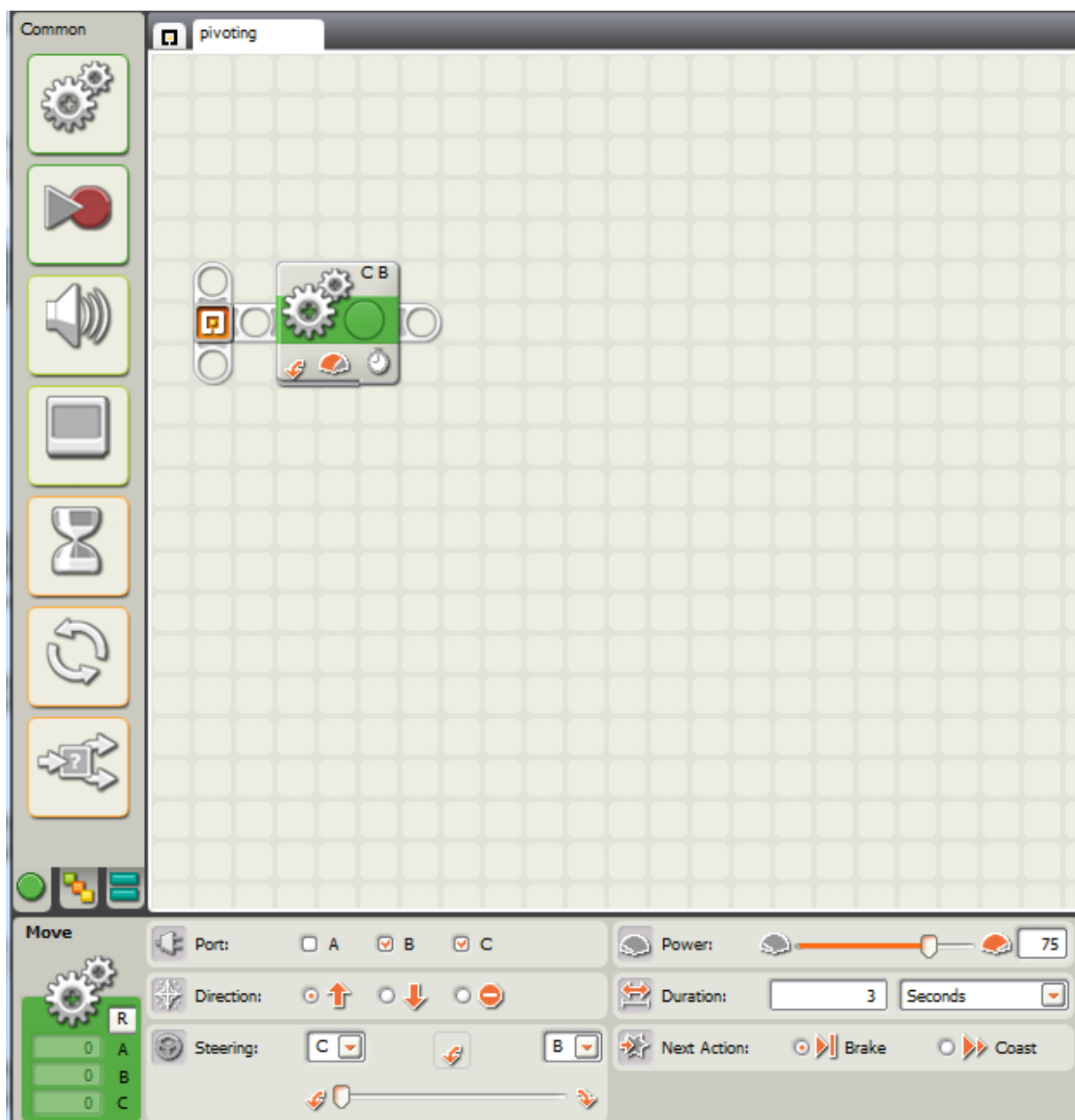
Program your robot to pivot on one wheel for 3 seconds.

or

Advanced

Pivot to the left so your robot spins around twice and ends back where it started.

Hint



Challenge 2 - Forwards

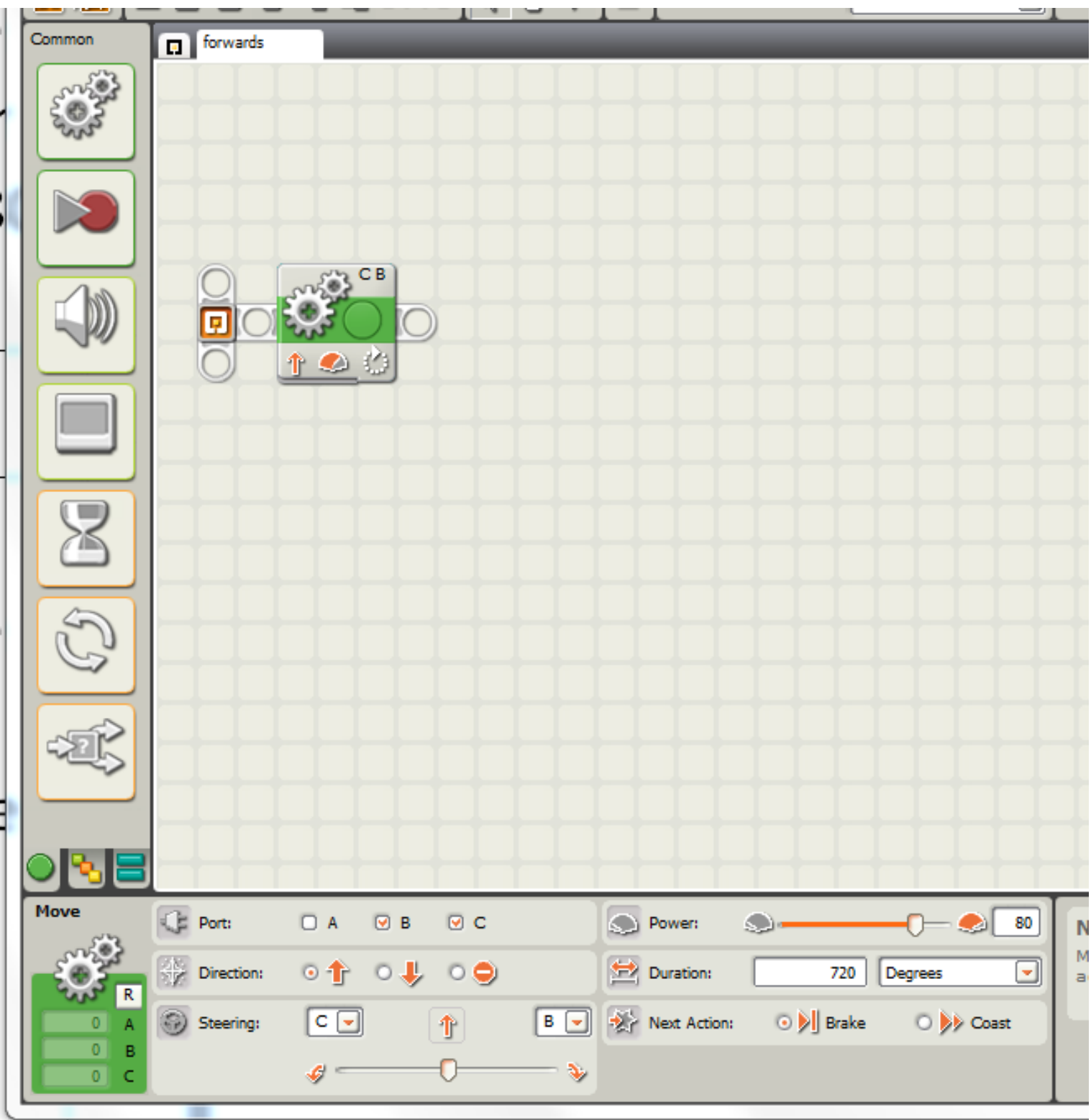
Program your robot to move forwards in a straight line for duration 720 degrees at power level 80 percent.

or

Advanced (need a ruler)

Program your robot to move forwards 50cm. Do this by measuring the circumference of your wheel to accurately program the number of rotations. Speed is up to you.

Hint



Challenge 3 - Backwards

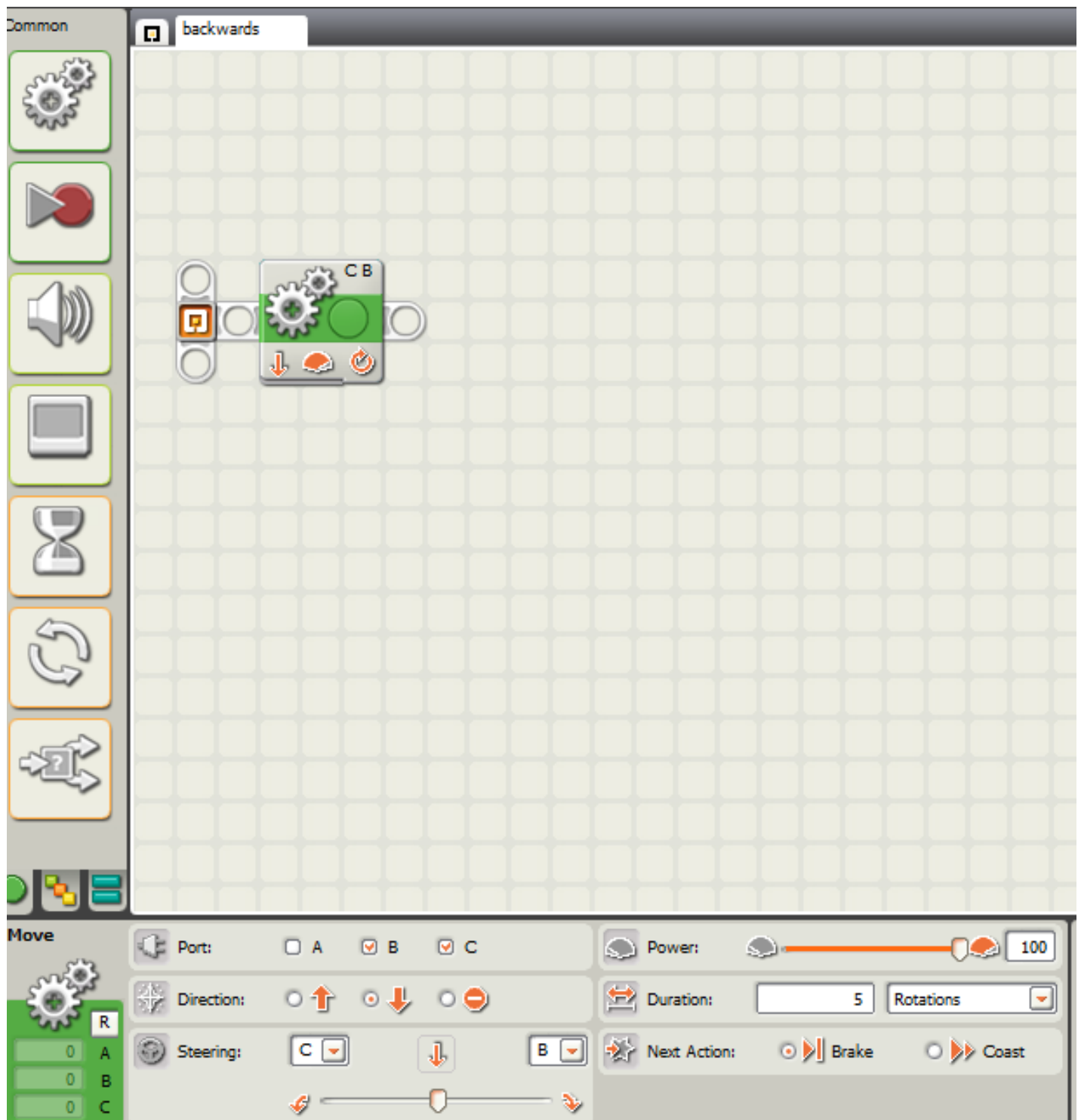
Program your robot to move backwards in a straight line for 5 rotations at power level 100 percent.

or

Advanced (need a ruler)

Program your robot to move backwards 80cm. Do this by measuring the circumference of your wheel to accurately program the number of rotations. Speed is up to you.

Hint



Challenge 4 - Turning

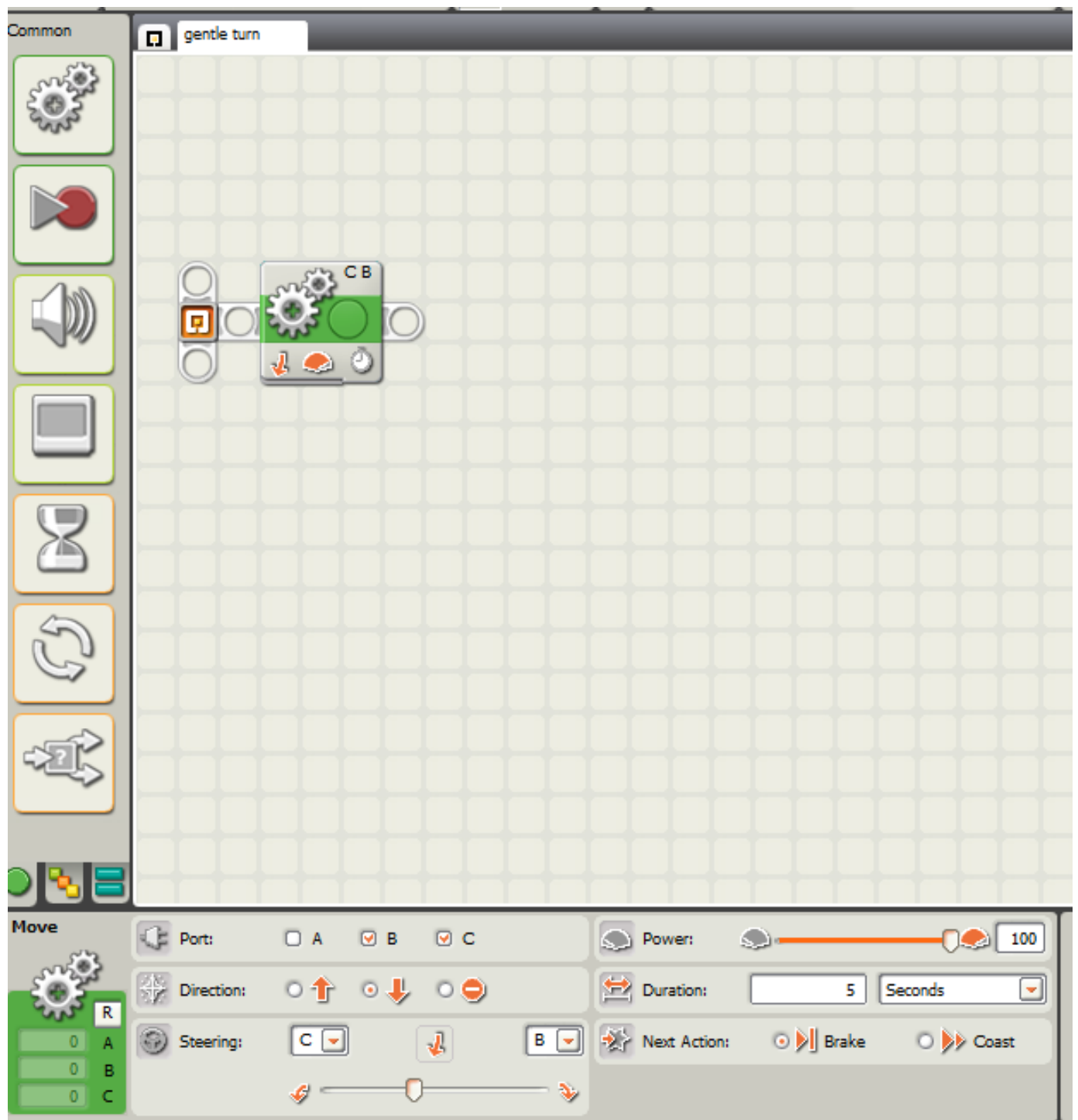
Program your robot to turn gently one way for 5 seconds.

or

Advanced

Program your robot to move forwards turning gently to the right for 3 seconds and then gently to the left for 3 seconds Repeat this 3 times. Speed is up to you.

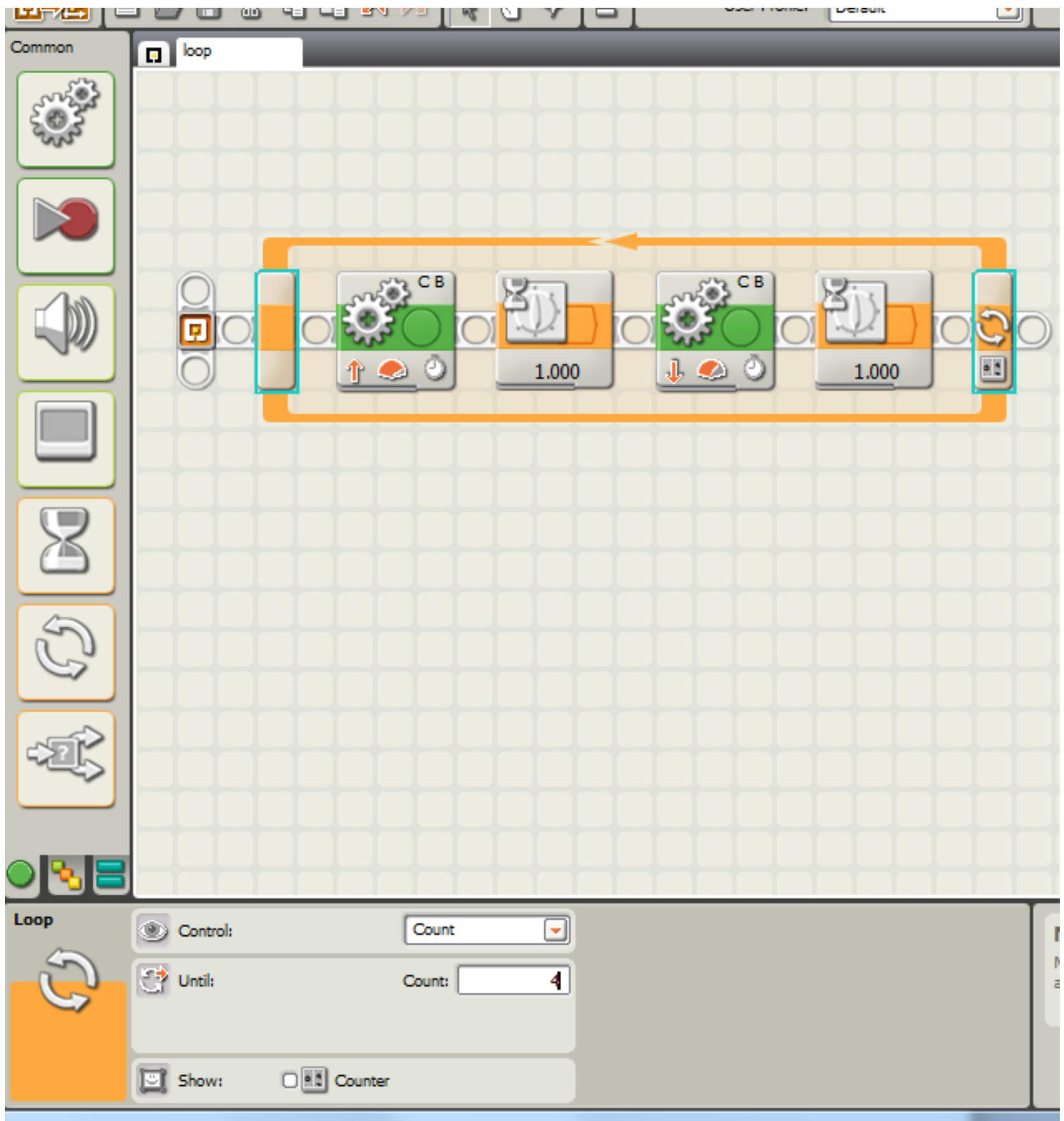
Hint



Challenge 5 – Using the loop or repeat command (everybody)

Program your robot to move forwards for 3 seconds, stop for 1 second, reverse for 3 seconds and stop for one second. Use the loop to repeat this 4 times.

Hint



Challenge 6 – Sounds and Displays

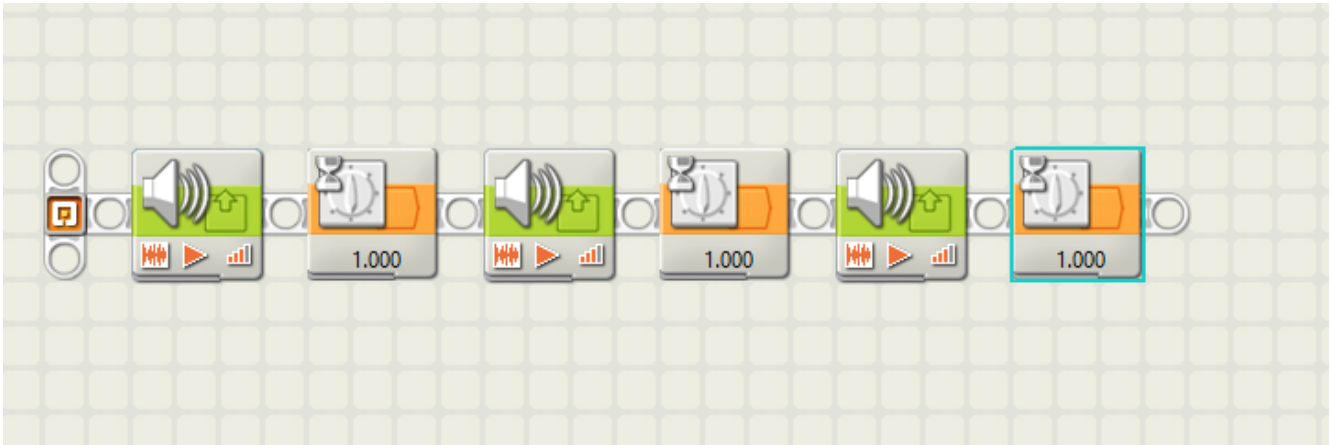
Program your robot to play three sounds and then show two displays.

or

Advanced

Use two parallel sequence beams to program your robot to play three sounds at the same time as showing two displays.

Hint



Playing three sounds



Showing two displays

Challenge 7 – Multitasking with parallel sequence beams

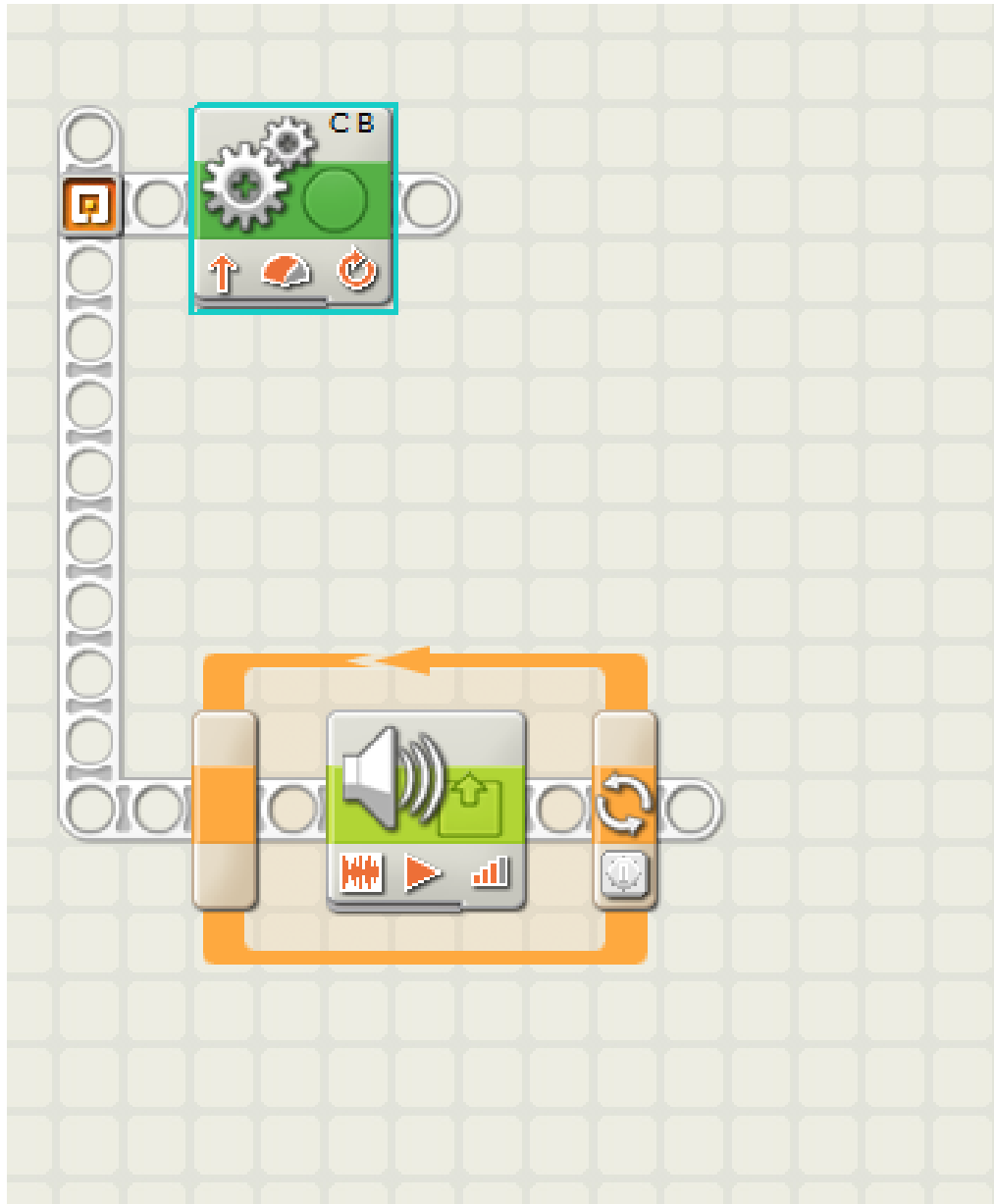
Program your robot to move forwards while making at least one sound.

or

Advanced

Use three parallel sequence beams to program your robot to move forwards while making at least one sound and displaying text that you have written.

Hint



Name _____ Class _____

Drivers' Licence Test – Level 1

Program your robot to move forwards for 3 seconds at one hundred percent power, stop for 1 second and then reverse at 50 percent power for 4 rotations. Use a loop to repeat this two times. At the same time have a sound playing or a display on your robot's screen.

You must create a flowchart

Save as 'Level 1 test'

or

Advanced

Program your robot to move forwards 50cm at 100 percent power, stop for 2 seconds, turn the robot around by pivoting on the spot until it has rotated 180 degrees and is facing back where it started from. Stop for 2 seconds and return to its starting point. Repeat this 2 times.

At the same time the robot makes at least 2 sounds and shows at least 2 displays.

You must create a flowchart.

Save as 'Adv Level 1 test'.

Show your teacher.

Congratulations you have earned your **Red Ps (regular/advanced)**

Please collect your new licence plate and attach it to your robot.

Go to Book 2 with the **red Ps** on the cover.

Drivers' Licence Test – Level 1 sign off sheet

Program your robot to move forwards for 3 seconds at one hundred percent power, stop for 1 second and then reverse at 50 percent power for 4 rotations. Use a loop to repeat this two times. At the same time have a sound playing or a display on your robot's screen.

You must create a flowchart

Save as 'Level 1 test'



Teacher's signature _____

or

Advanced

Program your robot to move forwards 50cm at 100 percent power, stop for 2 seconds, turn the robot around by pivoting on the spot until it has rotated 180 degrees and is facing back where it started from. Stop for 2 seconds and return to its starting point. Repeat this 2 times.

At the same time the robot makes at least 2 sounds and shows at least 2 displays.

You must create a flowchart.

Save as 'Adv Level 1 test'.



Teacher's signature _____

Congratulations you have earned your **Red Ps (regular/advanced)**

Please collect your new licence plate and attach it to your robot.

Go to Book 2 with the **red Ps** on the cover.

Marking Off Sheets for Book 1

Challenge 1 - Pivoting

Program your robot to pivot on one wheel for 3 seconds. ☐

Or Advanced

Pivot to the left so your robot spins around twice and ends back where it started. ☐

Marking partner name _____ signature _____ date _____

Challenge 2 - Forwards

Program your robot to move forwards in a straight line for duration 720 degrees at power level 80 percent. ☐

Or Advanced (need a ruler)

Program your robot to move forwards 50cm. Do this by measuring the circumference of your wheel to accurately program the number of rotations. Speed is up to you. ☐

Marking partner name _____ signature _____ date _____

Challenge 3 - Backwards

Program your robot to move backwards in a straight line for 5 rotations at power level 100 percent. ☐

Or Advanced (need a ruler)

Program your robot to move backwards 80cm. Do this by measuring the circumference of your wheel to accurately program the number of rotations. Speed is up to you. ☐

Marking partner name _____ signature _____ date _____

Challenge 4 - Turning

Program your robot to turn gently one way for 5 seconds. ☐

Or Advanced

Program your robot to move forwards turning gently to the right for 3 seconds and then gently to the left for 3 seconds Repeat this 3 times. Speed is up to you. ☐

Marking partner name _____ signature _____ date _____

Challenge 5 – Using the loop or repeat command

Program your robot to move forwards for 3 seconds, stop for 1 second, reverse for 3 seconds and stop for one second. Use the loop to repeat this 4 times. ☐

Marking partner name _____ signature _____ date _____

Challenge 6 – Sounds and Displays

Program your robot to play three sounds and show two displays. ☐

Or Advanced

Use two parallel sequence beams to program your robot to play three sounds at the same time as showing two displays. ☐

Marking partner name _____ signature _____ date _____

Challenge 7 – Multitasking with parallel sequence beams

Program your robot to move forwards while making at least one sound. ☐

Or Advanced

Use three parallel sequence beams to program your robot to move forwards while making at least one sound and displaying text that you have written. ☐

Marking partner name _____ signature _____ date _____