

Challenge 4: "Parking Bay Madness"

Teacher Resources:

Robot constructed in Challenge one.

Measuring equipment- rulers, tape measures etc

A series of parking bays- think of the set up of any shopping centre. Bays need to be of a reasonable width to allow for flexibility in solving this challenge. Bays can be constructed out of tape or blocks on the floor, to increase the complexity of the task, some parking bays may already have 'cars' parked in them.

SACSA Outcomes:

Task Card: Drive right in, step right up- Park your robot between the lines just like in any shopping centre parking bay. Sounds easy - just remember the parking bay has to be empty- we don't want too many insurance claims!

Question/ Research/ Reflection:

Making your robot turn can be done in a number of combinations. How did you turn your robot into the parking bay- which motors did you turn on or off at which stages? How could you tell that your robot had parked correctly? How many trials did you need to run, or what measurements did you need, if any?

At distance control/ teacher notes:

Students were shown a video of both the parking bay and a scale drawing so they could determine distances. Students were able to complete this challenge using the At Distance Protocols with no modifications to the challenge. Several students increased the complexity of the challenge by parking their robots in turn, thus introducing the need to 'check' the parking bay status using other sensors.

