

LESSON 13

Robot Car Claw

60 minutes (2 periods)

Integration Projects

WHAT THIS LESSON DOES

In this step-by-step lesson, you'll learn how to program a Robot Car Claw. Starting with setting up your Move Motor Car, you'll create a new project on the Microbit website, add the necessary extension, and understand how servos work. You'll then program the claw to close and open, and adjust the claw's grip. Finally, you'll be encouraged to explore other ways to program and use the claw.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand the setup and requirements for a Move Motor Car with a Move Motor Klaw and a Microbit.
- Develop skills in creating a new Microbit project using the provided website.
- Gain knowledge about the kitronik-move-motor extension and how to add it to the project.
- Comprehend the functioning of servos and their application in controlling the Move Motor Klaw.
- Acquire the ability to program the claw to open and close using specific code blocks.

BEFORE THE BELL

- Ensure you have a Move Motor Car with a Move Motor Klaw and a Microbit before starting. Create a new project on the Microbit website and add the kitronik-move-motor extension. Understand how servos work and how they control the claw's pinchers. Program the claw to close and open using specific codes and test these functions. Create a variable to vary the amount the claw closes and re-program the buttons to gradually open and close the claw. Encourage students to explore other programming possibilities with the claw.

Robot Car Claw

HOW THE LESSON RUNS	
Setup	
Create a new project	
Add the extension	
How servos work	
Close the claw	
Open the claw	
Open it on start	
Close it gradually	
Open it gradually	
Explore	