

Excavator

Applicable Age Group 6+

Activity Objectives

- ✓ Understand the structure and purpose of excavators
- ✓ Learn and apply vertical gear transmission
- ✓ Learn and use gears and the application of worm gear boxes

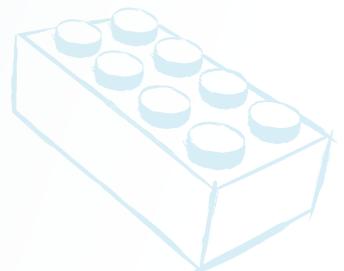
Activity Description

In this course, children will design a gear excavator based on gear transmission and worm gear boxes.



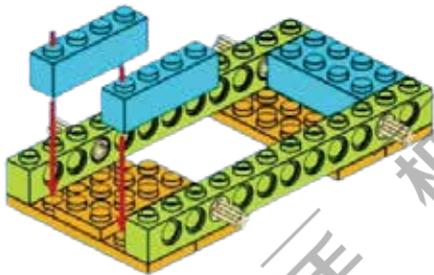
STEAM Literacy Development Indicators

Method Indicator	Situation Introduction & Problem Analysis	Using Gears to Construct	Testing Structural Stability and Smoothness	Understanding the Application of Worm Gear Boxes
Curiosity and Imagination	●			
Flexibility and Adaptability		●		
Verbal and Written Communication Skills				
Cross-boundary Cooperation and Exemplary Leadership				
Critical Thinking and Problem-solving Skills			●	
Proactive and Pioneering Spirit				●
Ability to Evaluate and Analyze Information				

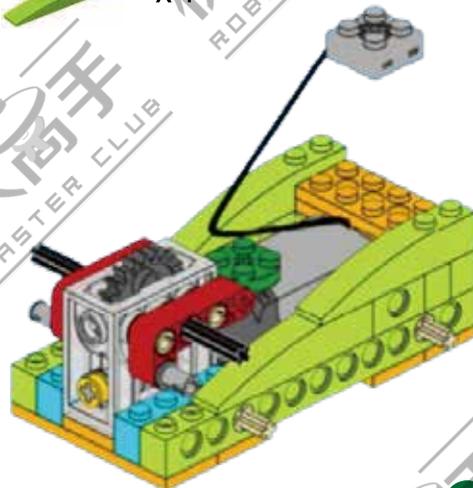


Building Block List

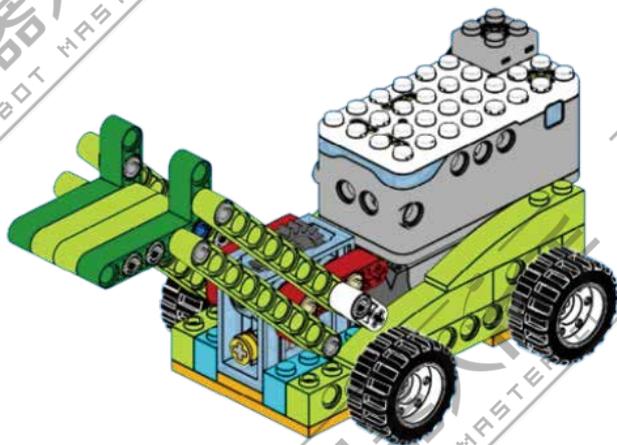
	X 3		X 1		X 2		X 1
	X 4		X 1		X 2		X 4
	X 1		X 7		X 2		X 4
	X 2		X 6		X 2		X 1
	X 2		X 4		X 4		X 1
	X 1		X 4		X 2		X 1
	X 1		X 2		X 2		X 1
	X 1		X 1		X 4		



1



2



3

Construction Steps

Makerzoid(App)-Robot Master(Kit)-Soccer Competition(Set)-5 Electric Engineering-32 Excavator