

Pull-Back Car

Applicable Age Group 5-6 year-old toddlers

- Activity Objectives**
- ☑ Understand elastic force and elastic potential energy.
 - ☑ Understand the process of energy conversion through games and experiments.
 - ☑ Be able to select appropriate measuring tools for simple distance measurement.

Activity Description Pull-back cars are common toys for children. Explore the launching principle of pull-back cars—learn that energy is first stored through a clockwork spring or belt, and when launched, the energy is released, allowing the car to travel a certain distance. Guide children to design a pull-back car by themselves: store elastic potential energy to launch the car, let the car move forward, and measure how far the car can travel.

STEAM Literacy Development Indicators

Method Indicator	Game-based introduction: Analyze energy conversion	Design and build a rubber-powered car	Test rubber band deformation and structural stability	Launch the car and measure the distance
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	●			



Interactive Tips

- Children have little exposure to energy conversion, but it is easy to understand. Pull-back cars are a very intuitive example—when analyzing energy conversion, ensure children clearly understand this process.

- For the elastic potential energy of rubber bands, use examples such as bows and arrows, springs, etc., to explain.
- Children may have no idea how to connect rubber bands; adult coaches need to provide assistance here, mainly to help children understand the elastic potential energy of rubber bands.
- Due to the elasticity of rubber bands, the car body structure has higher requirements—this ensures energy can be released when launching.

Find These Blocks



Connect One End of the Rubber Band to the Axle of the Car's Rear Wheels and the Other End to the Front of the Car

