

Flood Control Gate

Applicable Age Group 5-6 year-old toddlers

- Activity Objectives**
- ☑ Explore the function of pulley devices.
 - ☑ Understand the characteristics and functions of worm gear structures.
 - ☑ Based on the understanding of flood control needs, design and build a flood control gate structure.

Activity Description During the rainy season, continuous heavy rains often lead to excessive water accumulation and floods. To control floods, analyze the problem with children, propose solutions, and guide them to design and build a flood control gate by hand. This process will involve the use of pulley and worm gear devices, helping children explore the characteristics and application scenarios of these two structures.

STEAM Literacy Development Indicators

Method Indicator	Situation-based introduction: Analyze the problem	Design and build a flood gate using mechanical structures	Test the stability and smoothness of the structure	Recreate scenarios to understand the working process of the flood gate
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

- A flood control gate has a controllable gate. The gate can be opened by lifting—directly controlled by pulleys—or by rotating: fix the gate, activate the worm gear, and the gate will rotate to open.
- Regardless of the gate-opening method or the mechanical structure used, structural stability cannot be neglected. When guiding children, emphasize the connection and fixation between blocks.

