

Catapult

Applicable Age Group 5-6 year-old toddlers

- Activity Objectives**
- ☑ Further explore and understand the lever principle, as well as the structure and application of effort-consuming levers.
 - ☑ Understand the relationship between force, fulcrum and torque in effort-consuming levers.
 - ☑ Measure and record the throwing distance.

Activity Description Play a stone-throwing game with children to see who can throw the farthest. Make a stone-throwing device by hand to further explore levers, and understand effort-consuming levers and their applications. Through experiments and observations, understand the relationship between force, fulcrum and torque in effort-consuming levers, and be able to conduct simple distance measurements.

STEAM Literacy Development Indicators

Method Indicator	Situation-based introduction: Analyze problems	Build a catapult using a lever structure	Understand the characteristics and applications of effort-consuming levers	Learn about the history and functions of catapults
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

- For the stone-throwing device, first provide building blocks for children to make simple plans and experiments, and finally find a solution.
- Determining the position of the fulcrum is both a difficulty and a key point. This process requires children to adjust and try repeatedly with patience. The final fulcrum position is not in the middle, but it can launch stones well and throw them relatively far.
- Find the position of the fulcrum, observe the characteristics of this lever, and figure out the relationship between the fulcrum, force and torque.

Find These Blocks



Determine the Fulcrum Position and Design/Build a Catapult Using Lever Structure

