Embossing Machine

Applicable Age Group 5-6 year-old toddlers

Activity Objectives

☑ Further explore gear meshing devices.

☑ Understand the transmission direction of intermeshing gears.

Activity Description Discuss with children: to decorate a party venue, there are many beautiful ribbons. Use gear meshing to creatively design an embossing machine. During the operation process, observe and understand that the directions of two intermeshing gears are opposite, so as to achieve the purpose of embossing patterns on the ribbons.

STEAM Literacy Development Indicators

Method / Indicator	Situation-based introduction: Analyze problems	Build an embosser using interlocking gears	Observe and understand the movement direction of interlocking gears	Knowledge expansion: Strengthen functions
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

- Gear meshing has been involved in many activities. The embossing machine itself is a process of flexible application. If children have not mastered gear meshing, a short demonstration can be given before starting the construction.
- It is easy for children to have misunderstandings when imagining without physical objects. To explain how to use gear meshing to emboss patterns on ribbons, prepare ribbons in advance and give a simple embossing demonstration.

- Since patterns need to be embossed on ribbons, the width of the intermeshing gears must be at least the same as that of the ribbons. Only in this way can the ribbons be put in and embossed with patterns.
- Structural stability requires a relatively large base, so that the machine will not tilt during operation.

Find These Blocks

Build a stamping machine using the meshing of gears.