

Revolving Stage

Applicable Age Group 5-6 year-old toddlers

- Activity Objectives**
- ☑ Use the characteristic of bevel gears (changing transmission direction) to design and build a revolving stage.
 - ☑ Be able to freely combine gear arrangements according to needs to achieve a speed reduction effect.

Activity Description Children need to find ways to design the structure of a small revolving stage. They will use the gear transmission devices they have experienced before, analyze the design requirements of the stage, and apply bevel gears (which can change the transmission direction) to make the rotation operation of the small stage more convenient. Although the stage revolves, its speed must not be too fast to ensure safety. Therefore, gear reduction will be used to make the stage rotate. Finally, display your stage!

STEAM Literacy Development Indicators

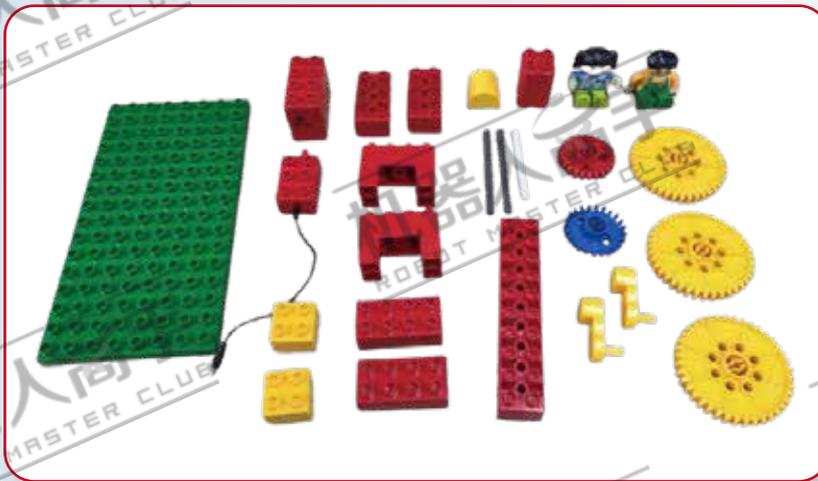
Method Indicator	Situation-based introduction: Discuss rotating devices	Design a model using gear transmission	Observe, analyze and improve the stage's operation	Demonstrate the stage effect
Curiosity and Imagination				
Flexibility and Adaptability		●		
Verbal and Written Communication Skills				●
Cross-boundary Cooperation and Exemplary Leadership				
Critical Thinking and Problem-solving Skills			●	
Proactive and Pioneering Spirit				
Ability to Evaluate and Analyze Information	●			

Interactive Tips

- The revolving stage is a creative design that requires applying the transmission knowledge learned before, which is a further application of key points. Encourage children to share their ideas more.

- Gear transmission is the most common transmission structure. How to use gear transmission and gear combinations is a difficulty—children need to have a basic framework structure before starting hands-on building.
- The application of bevel gears mainly lies in their ability to change the transmission direction. The stage structure requires hidden yet convenient operation, so bevel gears are the most suitable choice.
- To ensure the stage's stability, the revolving speed of the stage must not be too fast. Therefore, a speed-reducing transmission method is adopted.

Find These Blocks



Bevel Gears Can Change the Transmission Direction—Use the Combination of Bevel Gears and Spur Gears to Design a Small Revolving Stage

