Engineering Vehicle Deployment

Applicable Age Group 5-6 year-old toddlers

Activity Objectives

☑ Analyze functional requirements and creatively design engineering structures.

☑ Improve the ability to analyze and solve problems.

Activity Description

Observe and identify problems in the busy operations of construction sites together, then analyze and solve them creatively. We find that some construction sites have limited space, and many engineering vehicles operate at the same time. Through analysis, the final solution is to create multi-functional engineering vehicles—one vehicle can solve two or more problems. For example, an engineering vehicle can both dig soil and load/unload materials like cement and soil.

STEAM Literacy Development Indicators

Method / Indicator	Situation-based introduction: Analyze problems	Create a multi-functional engineering vehicle	Test the stability of the structure and tools	Build scenes to 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

- For 5-6 year old children, create opportunities for them to identify, analyze and solve problems. The focus of this activity is to provide space for children to discover and explore.
- Creative solutions put more emphasis on children' s logic and abilities, so communication should be detailed and specific. For example, ask questions like "What do you think causes this problem?" and "What tool can solve it?"

- The tools used can be diverse, such as buckets, push shovels, dump buckets, etc. Ensure each tool can be used when installing.
- The structure is relatively complex; each part needs to be tightened to ensure overall stability.

Find These Blocks

Creatively Design an Engineering Vehicle That Can Dig Soil and Load/Unload Soil, Cement and Other Materials