

CASE 06 · SPACE SCIENCE KIT

THE RETURNER

ASSEMBLY GUIDE · Techtelligence- Elecbreaks

34 STEPS

DESIGN BRIEF

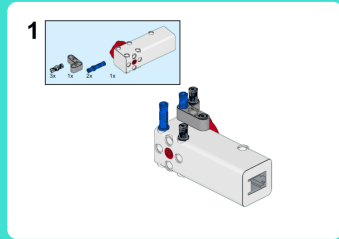
OBJECTIVE

Construct the Returner — a sample-return capsule vehicle designed to collect and transport lunar specimens. This 34-step build covers capsule mechanics, claw assembly, and re-entry vehicle design principles.

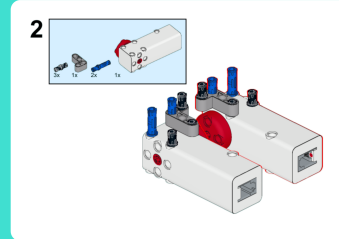
DESIGN PRINCIPLES

- 01. Structural Integrity** Robust modular frame construction ensures stability throughout the entire assembly and operation.
- 02. Step-by-Step Build** Sequential instruction design guides students from individual components to a complete working model.
- 03. STEM Integration** Hands-on mechanics reinforce space science, engineering, and robotics concepts at every stage.
- 04. Scalable Design** Standardised connectors allow for reconfiguration and adaptation of the final model.

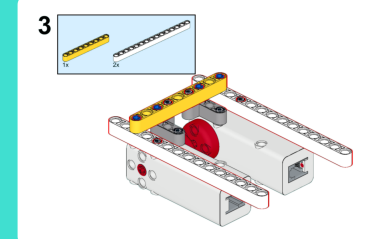
PROGRESS: 18% COMPLETE (6 of 34 steps)



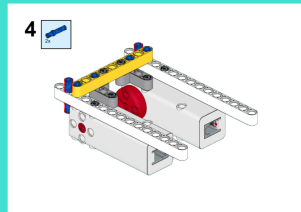
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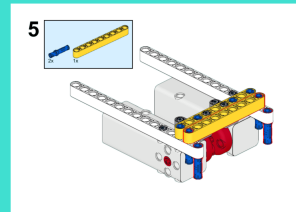
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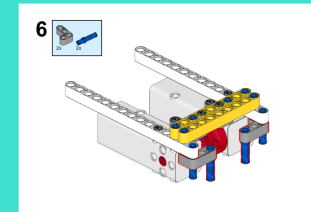
STEP 3



STEP 4

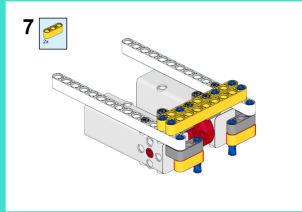


STEP 5

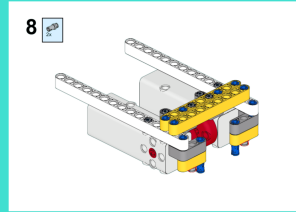


STEP 6

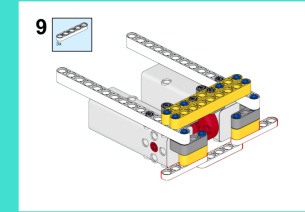
PROGRESS: 35% COMPLETE (12 of 34 steps)



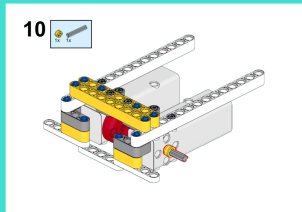
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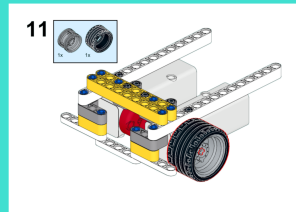
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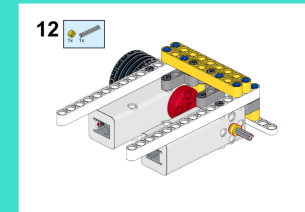
STEP 9



STEP 10

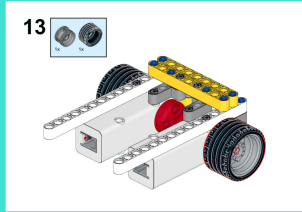


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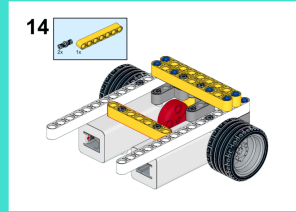


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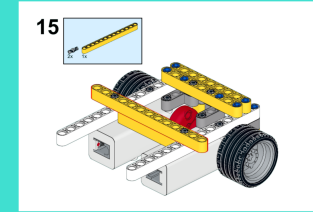
PROGRESS: 53% COMPLETE (18 of 34 steps)



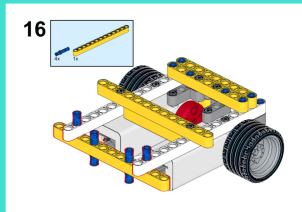
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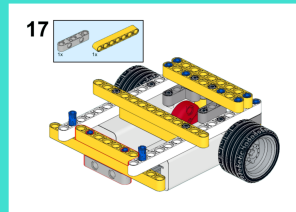
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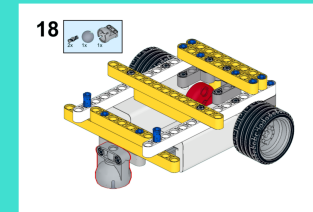
STEP 15



STEP 16

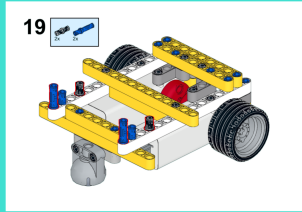


STEP 17

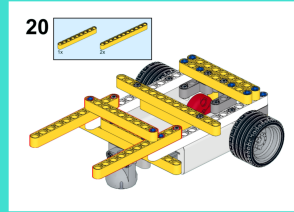


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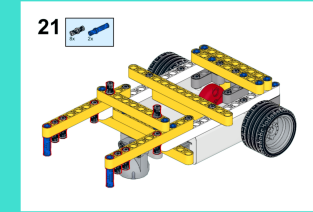
PROGRESS: 71% COMPLETE (24 of 34 steps)



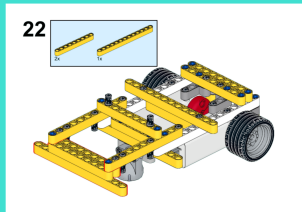
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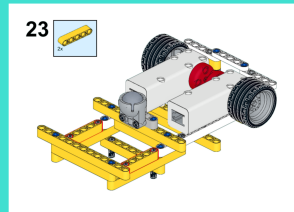
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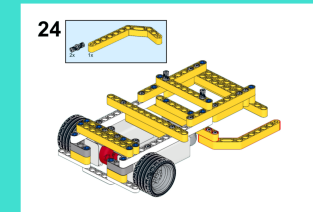
STEP 21



STEP 22

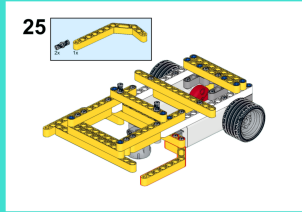


STEP 23

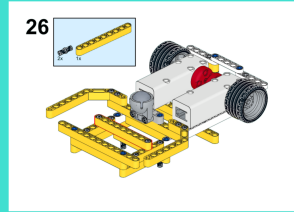


STEP 24

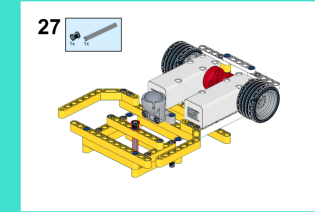
PROGRESS: 88% COMPLETE (30 of 34 steps)



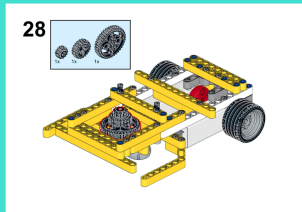
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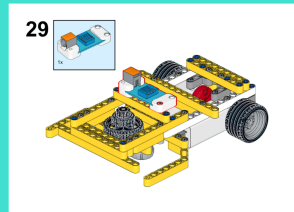
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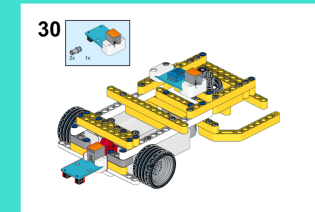
STEP 27



STEP 28

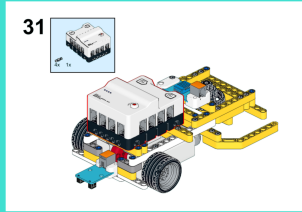


STEP 29

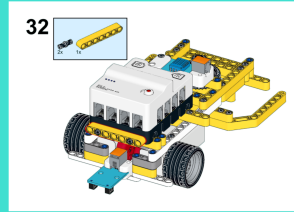


STEP 30

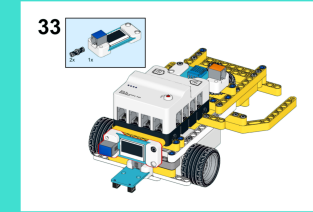
PROGRESS: 100% COMPLETE (34 of 34 steps)



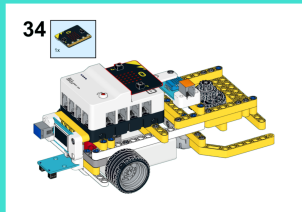
STEP 31



STEP 32



STEP 33



STEP 34