

CASE 2 · SPACE SCIENCE KIT

# MOON LANDING ROCKET

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ASSEMBLY GUIDE · Techtelligence- ElecFreaks

**55 STEPS**

# DESIGN BRIEF

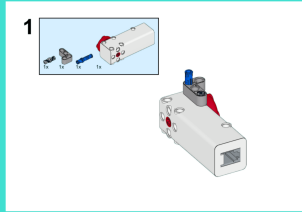
## OBJECTIVE

Construct a fully functional Moon Landing Rocket model using modular block-based components. Students explore space science concepts through hands-on assembly of a realistic rocket vehicle with motorised mechanisms and two build sequences.

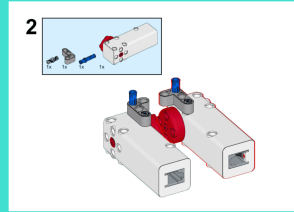
## DESIGN PRINCIPLES

- 01. Structural Integrity** Robust frame construction ensures the rocket chassis withstands assembly and operation forces.
- 02. Modular Sub-Assemblies** Two build sequences: main body (39 steps) plus specialised rocket components (15 steps).
- 03. Motorised Mechanics** Integrated motors and sensors replicate real rocket launch-pad control systems.
- 04. Space Science Context** Each phase reinforces STEM concepts: propulsion, guidance, and payload deployment.

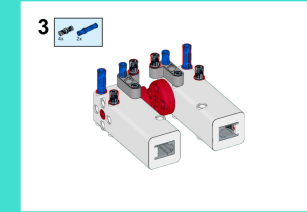
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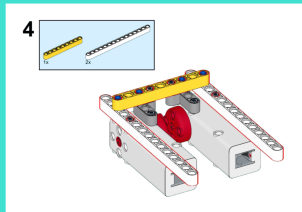
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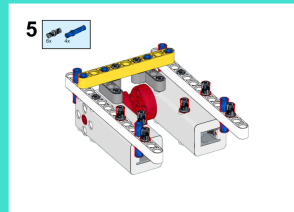
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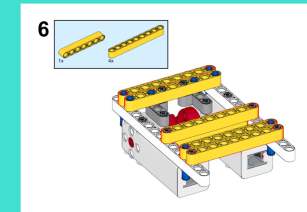
STEP 3



STEP 4

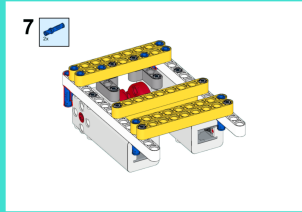


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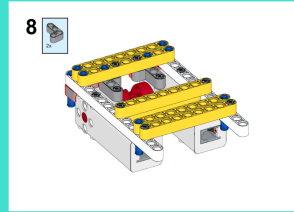


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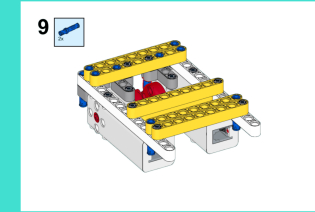
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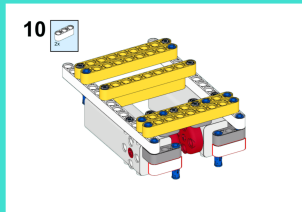
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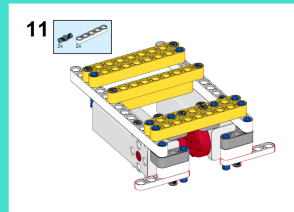
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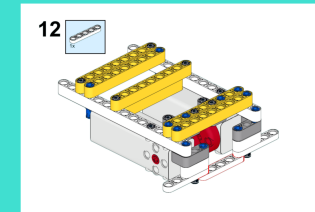
STEP 9



STEP 10

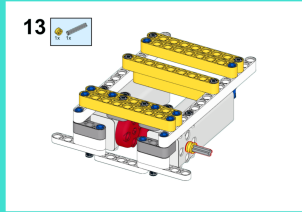


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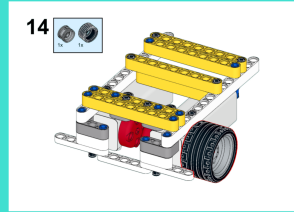


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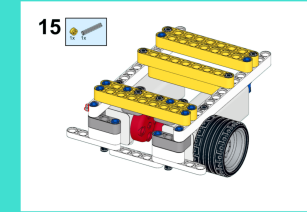
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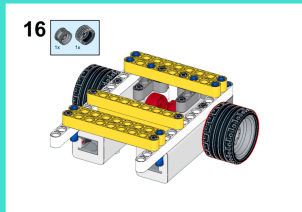
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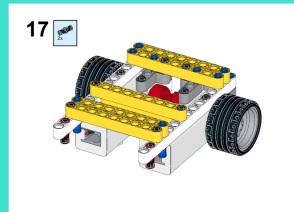
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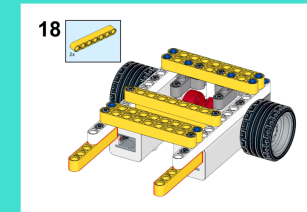
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STEP 16

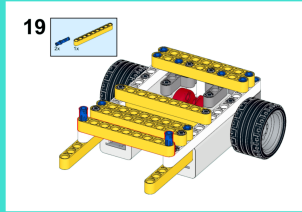


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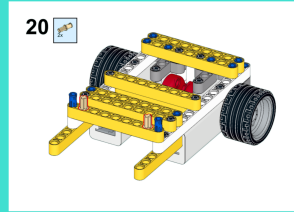


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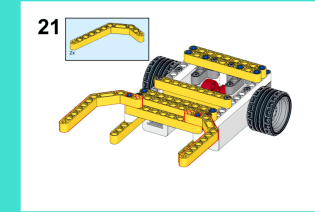
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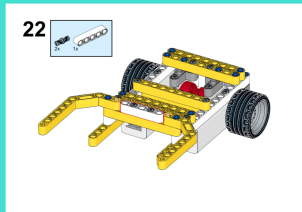
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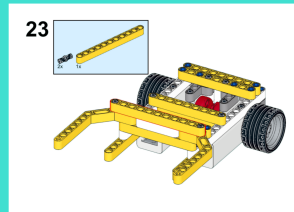
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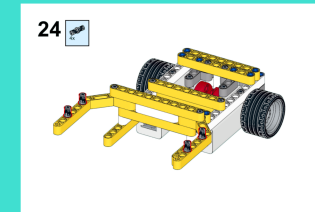
STEP 21



STEP 22

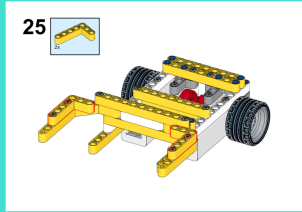


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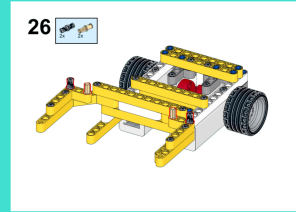


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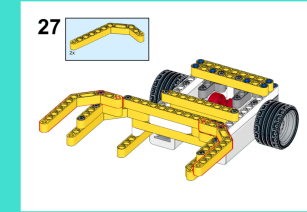
PROGRESS: 55% COMPLETE (30 of 55 steps)



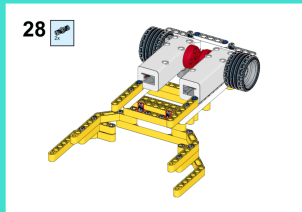
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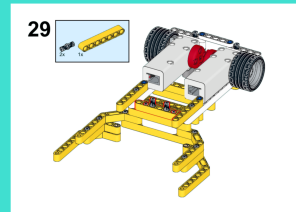
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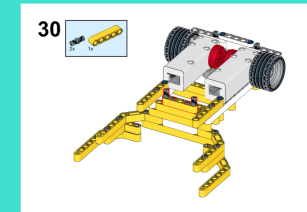
STEP 27



STEP 28

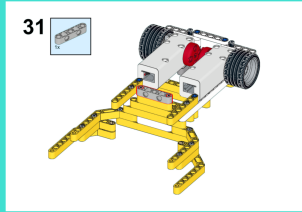


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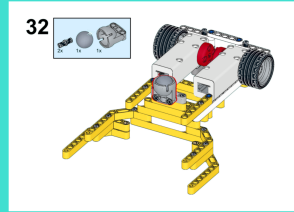


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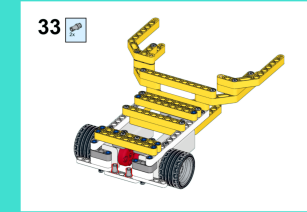
PROGRESS: 65% COMPLETE (36 of 55 steps)



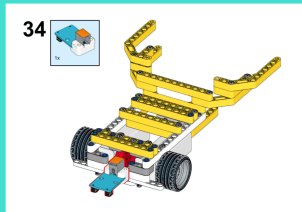
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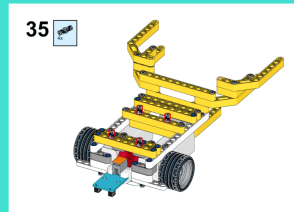
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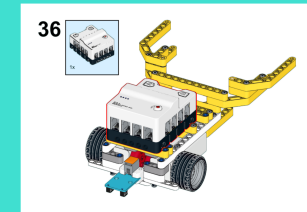
STEP 33



STEP 34

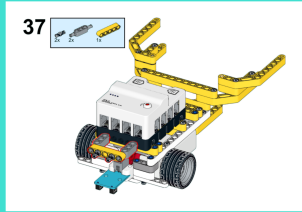


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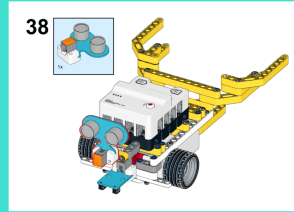


STEP 36

PROGRESS: 76% COMPLETE (42 of 55 steps)



STEP 37



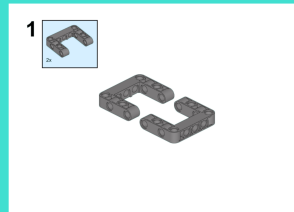
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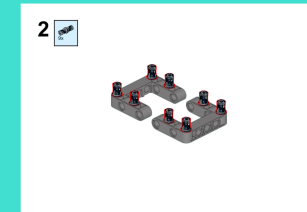
STEP 39



PARTS

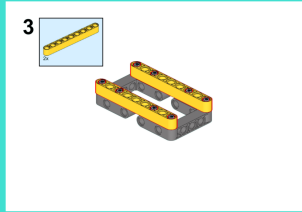


PART 2 · STEP 1

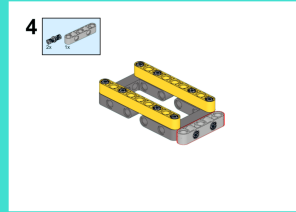


PART 2 · STEP 2

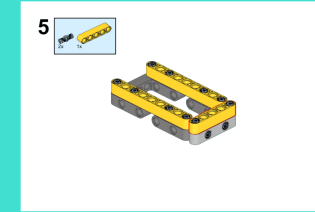
PROGRESS: 87% COMPLETE (48 of 55 steps)



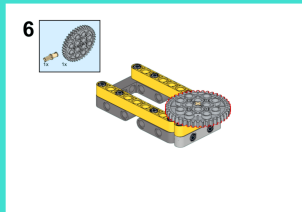
PART 2 · STEP 3



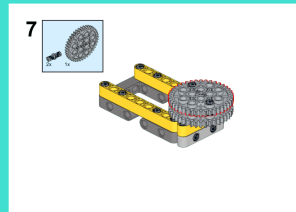
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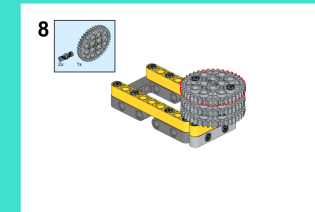
PART 2 · STEP 5



PART 2 · STEP 6

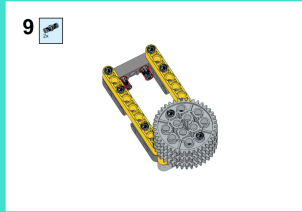


PART 2 · STEP 7

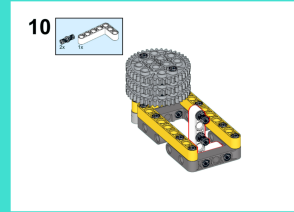


PART 2 · STEP 8

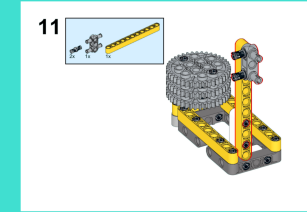
PROGRESS: 98% COMPLETE (54 of 55 steps)



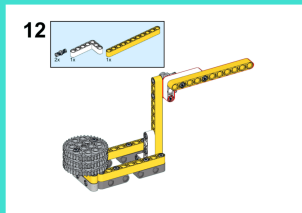
PART 2 · STEP 9



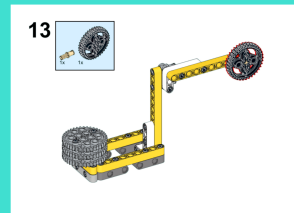
PART 2 · STEP 10



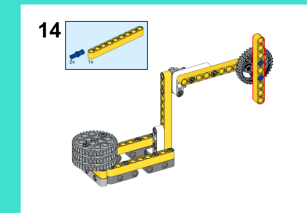
PART 2 · STEP 11



PART 2 · STEP 12

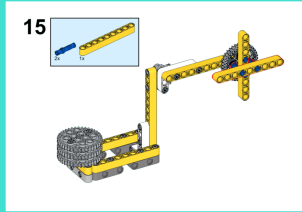


PART 2 · STEP 13



PART 2 · STEP 14

PROGRESS: 100% COMPLETE (55 of 55 steps)



PART 2 · STEP 15