

CASE 07 · SPACE SCIENCE KIT

# SPACE STATION

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ASSEMBLY GUIDE · Techtelligence- Elecbreaks

**72 STEPS**

# DESIGN BRIEF

## OBJECTIVE

Construct an elaborate Space Station model featuring modular docking bays, rotating solar panels, and a central command hub. This 72-step build explores orbital mechanics, structural engineering, and the systems that keep a real space station operational.

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## DESIGN PRINCIPLES

- |                                 |  |
|---------------------------------|--|
| <b>01. Structural Integrity</b> | Robust modular frame construction ensures stability throughout assembly and operation. |
| <b>02. Step-by-Step Build</b>   | Sequential instructions guide students from individual components to a complete model. |
| <b>03. STEM Integration</b>     | Hands-on mechanics reinforce space science, engineering, and robotics at every stage.  |
| <b>04. Scalable Design</b>      | Standardised connectors allow reconfiguration and adaptation of the final model.       |

PROGRESS: 8% (6 of 72 steps)



STEP 1



STEP 2



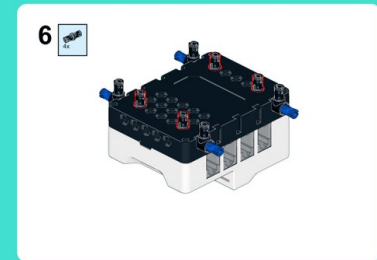
STEP 3



STEP 4

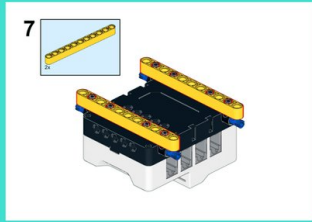


STEP 5

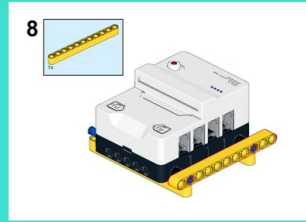


STEP 6

PROGRESS: 17% (12 of 72 steps)



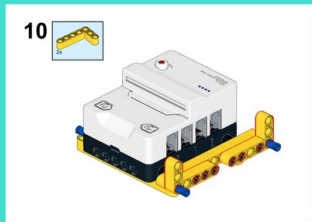
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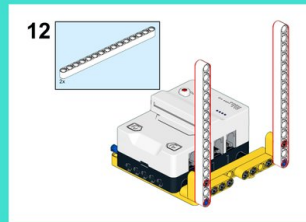
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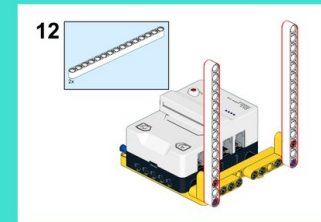
STEP 9



STEP 10

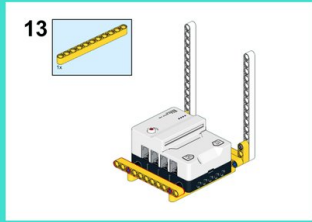


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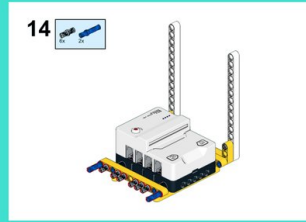


STEP 12

PROGRESS: 25% (18 of 72 steps)



STEP 13



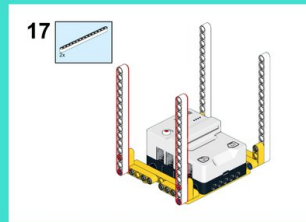
STEP 14



STEP 15



STEP 16

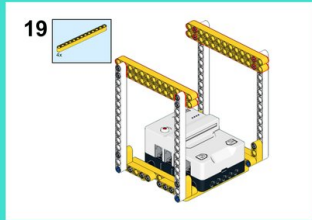


STEP 17

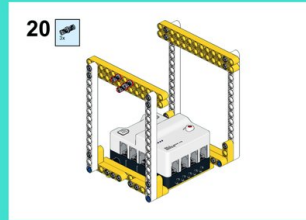


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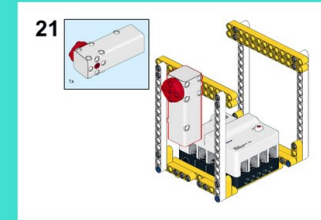
PROGRESS: 33% (24 of 72 steps)



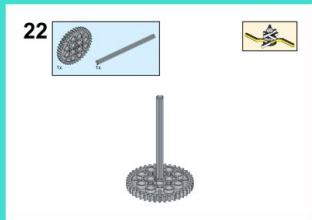
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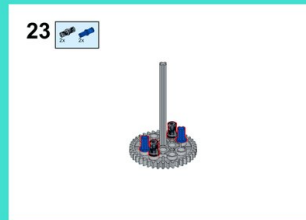
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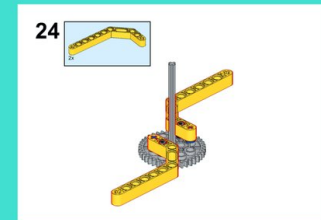
STEP 21



STEP 22

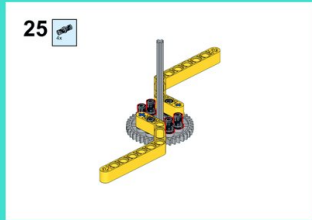


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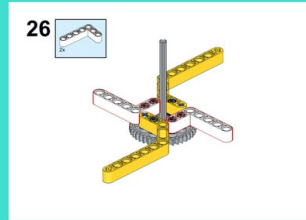


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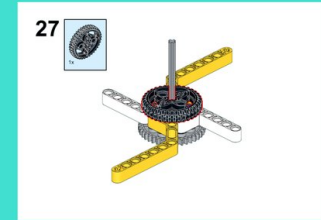
PROGRESS: 42% (30 of 72 steps)



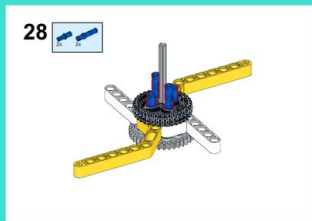
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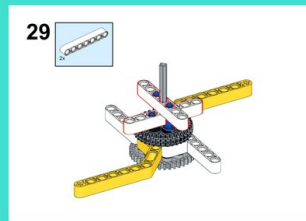
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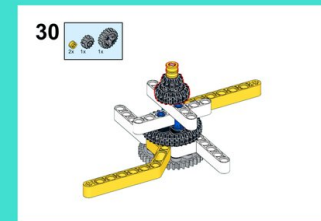
STEP 27



STEP 28



STEP 29

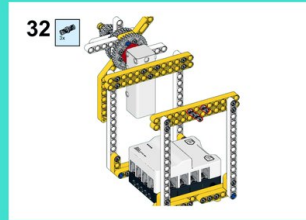


STEP 30

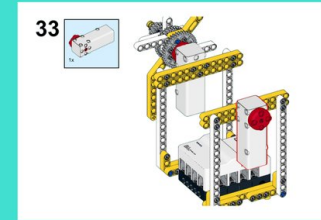
PROGRESS: 50% (36 of 72 steps)



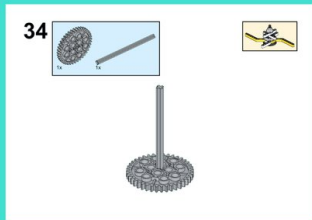
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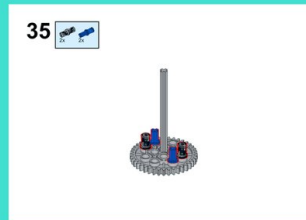
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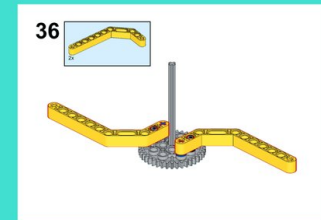
STEP 33



STEP 34

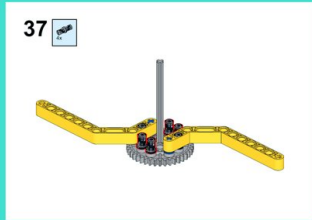


STEP 35

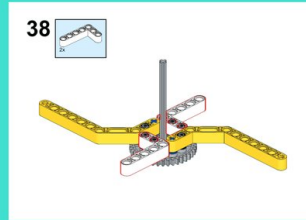


STEP 36

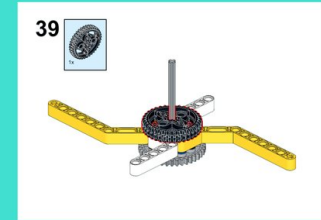
PROGRESS: 58% (42 of 72 steps)



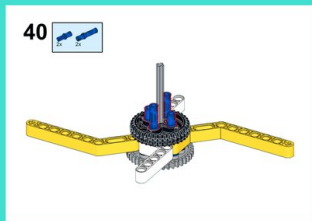
STEP 37



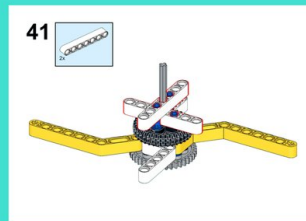
STEP 38



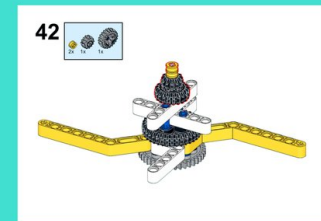
STEP 39



STEP 40

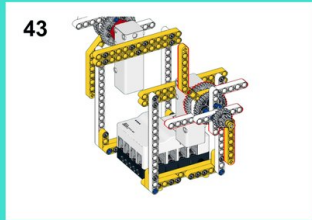


STEP 41

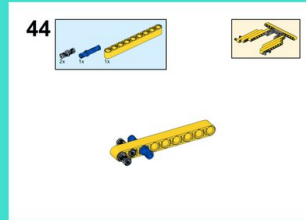


STEP 42

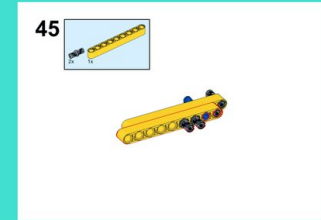
PROGRESS: 67% (48 of 72 steps)



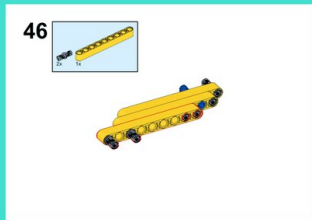
STEP 43



STEP 44



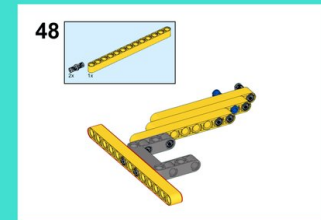
STEP 45



STEP 46



STEP 47

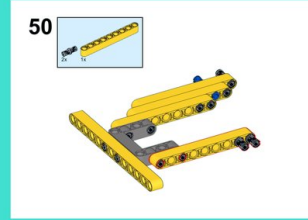


STEP 48

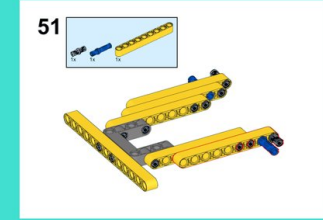
PROGRESS: 75% (54 of 72 steps)



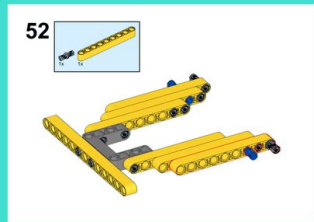
STEP 49



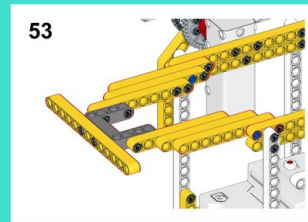
STEP 50



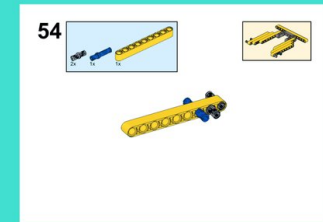
STEP 51



STEP 52

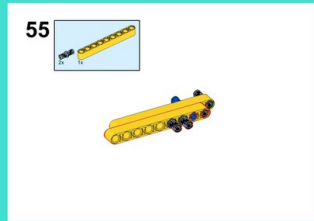


STEP 53

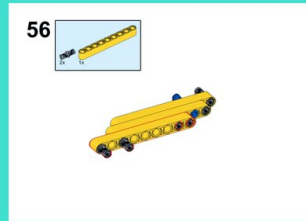


STEP 54

PROGRESS: 83% (60 of 72 steps)



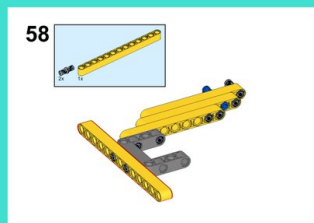
STEP 55



STEP 56



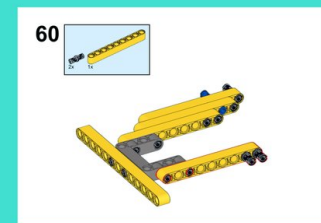
STEP 57



STEP 58

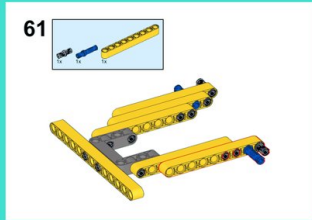


STEP 59

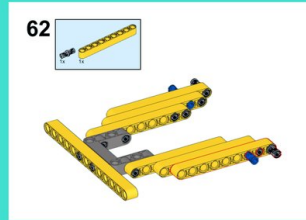


STEP 60

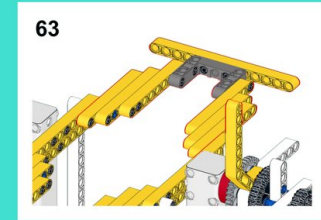
PROGRESS: 92% (66 of 72 steps)



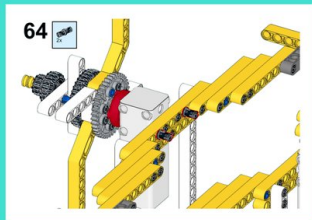
STEP 61



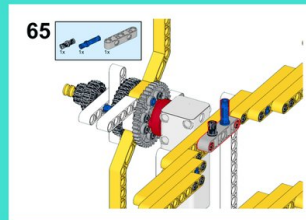
STEP 62



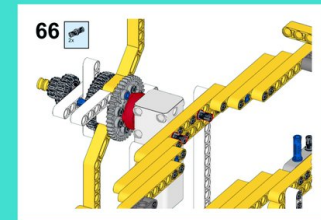
STEP 63



STEP 64

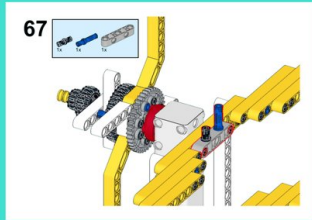


STEP 65

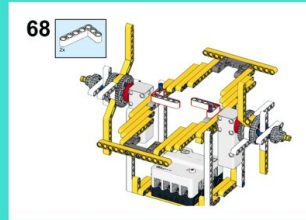


STEP 66

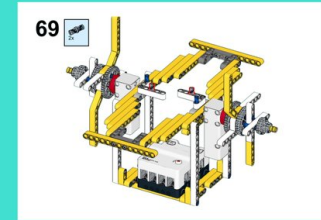
PROGRESS: 100% (72 of 72 steps)



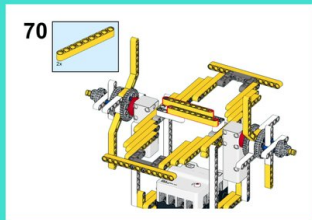
STEP 67



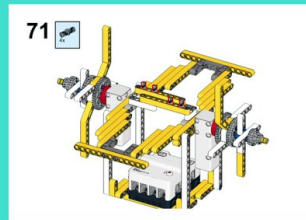
STEP 68



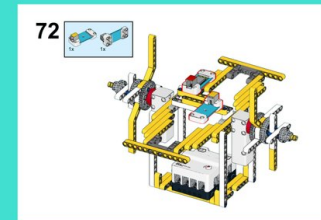
STEP 69



STEP 70



STEP 71



STEP 72