

CASE 08 · SPACE SCIENCE KIT

SPACE EXPERIMENT

ASSEMBLY GUIDE · Techtelligence- Elec Freaks

54 STEPS

DESIGN BRIEF

OBJECTIVE

Assemble a Space Experiment platform complete with sensors, motorised mechanisms, and a plant growth module. This build brings real space science to life, exploring how experiments are conducted in microgravity environments aboard orbital stations.

DESIGN PRINCIPLES

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

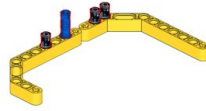
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1



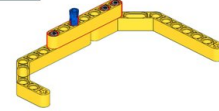
STEP 1

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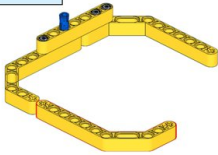
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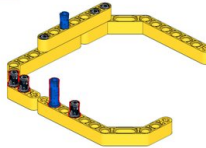
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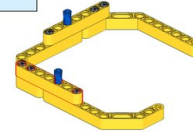
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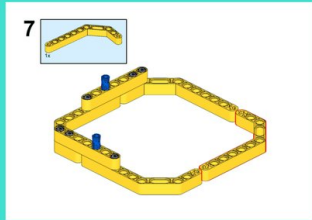
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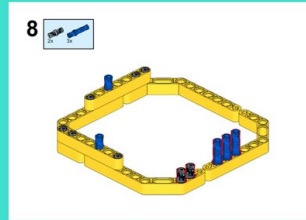


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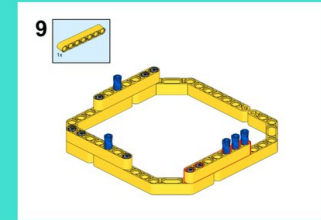
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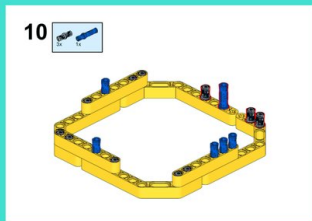
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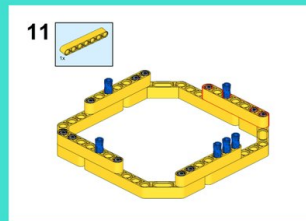
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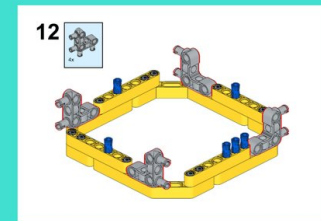
STEP 9



STEP 10

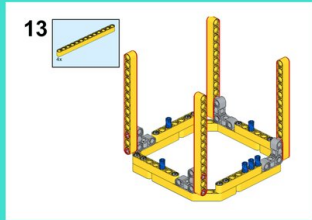


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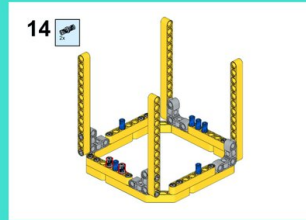


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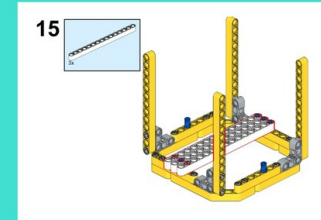
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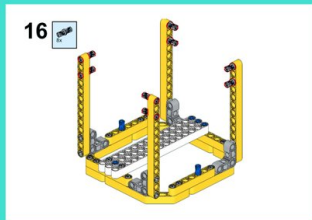
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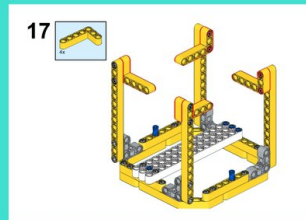
STEP 14



STEP 15



STEP 16



STEP 17



STEP 18

PROGRESS: 44% (24 of 54 steps)

19



STEP 19

20



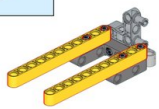
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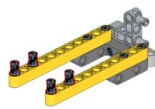
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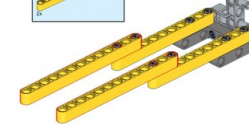
STEP 22

23



STEP 23

24

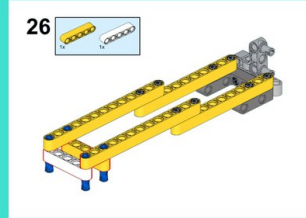


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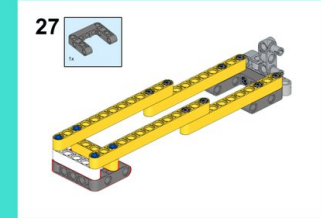
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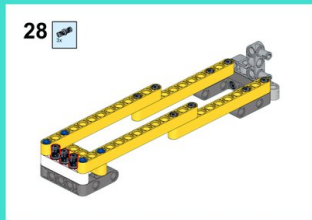
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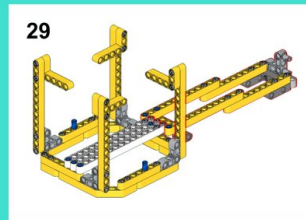
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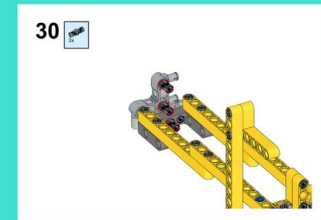
STEP 27



STEP 28

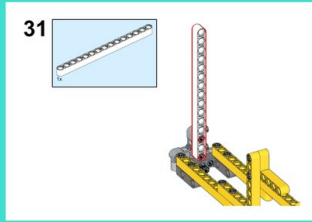


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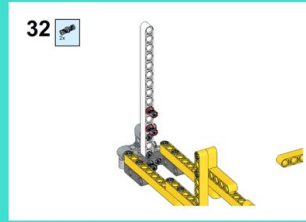


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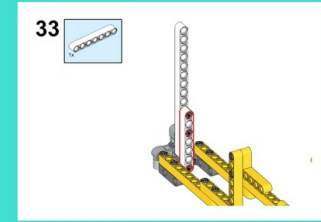
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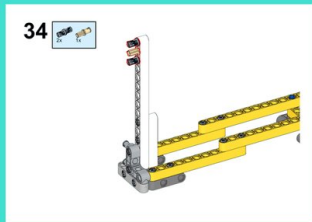
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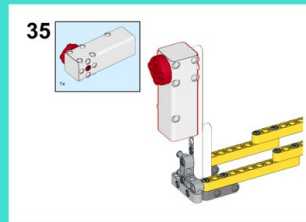
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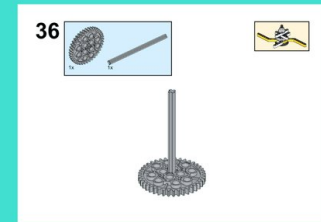
STEP 33



STEP 34

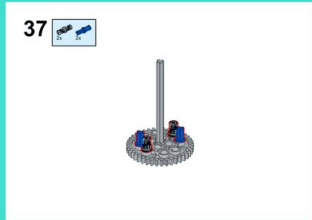


STEP 35

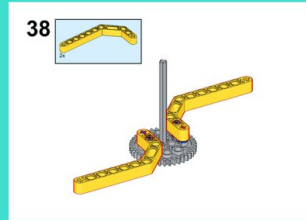


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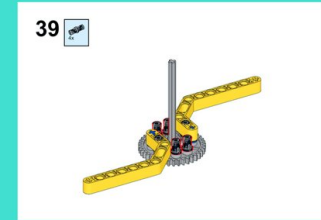
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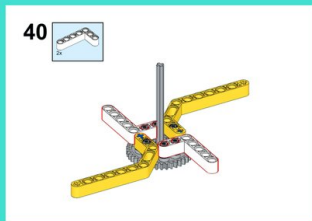
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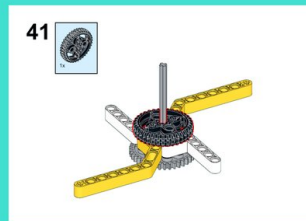
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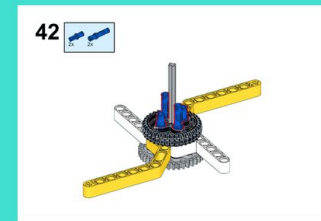
STEP 39



STEP 40

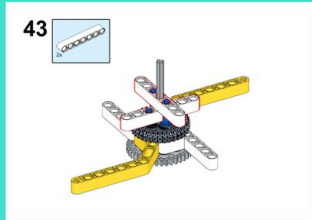


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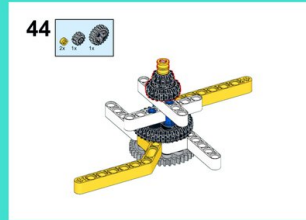


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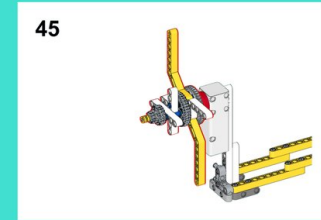
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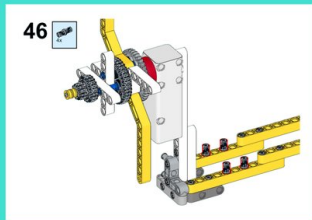
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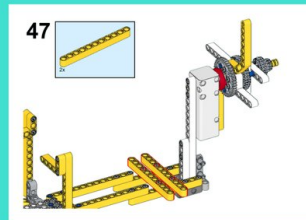
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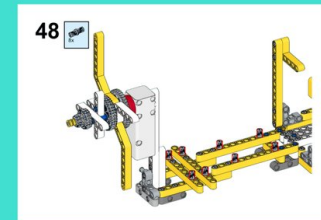
STEP 45



STEP 46

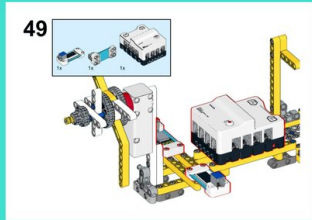


STEP 47



STEP 48

PROGRESS: 100% (54 of 54 steps)



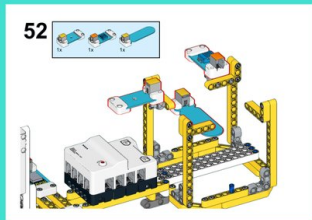
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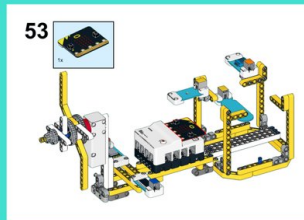
STEP 50



STEP 51



STEP 52



STEP 53



PARTS