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# DIY HYDRAULIC X-CAVATOR SEMI VERSION

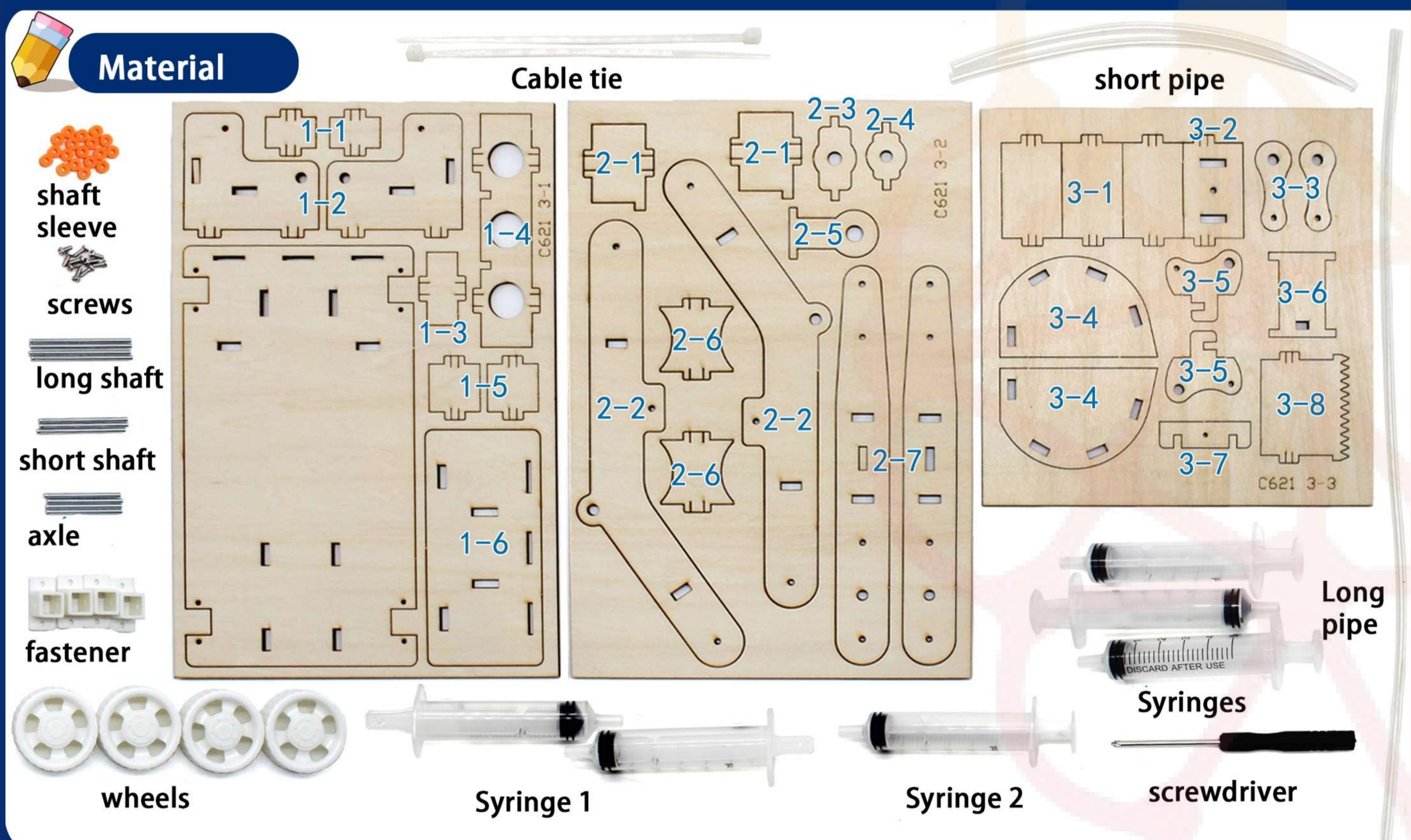
STEMagination Labs

## How do Hydraulics work?

Let's imagine the syringes are like muscles for the excavator. In a real excavator, there is a kind of oil that pushes on parts to make the excavators move its arms and claw. This toy uses water instead of oil. When you push down on the syringes, you are pushing water into tubes. The water pushes on parts in the excavator, which makes the claw move up and down just like a real excavator! So, the syringes are like pretend muscles that help the excavator work.

We at STEMagination Labs want to thank you for choosing us to fuel your child's imagination and love of learning! STEM toys are a fantastic way to explore science, technology, engineering, and math in a fun and engaging way.

We hope you and your child enjoy this new STEMtastic adventure!



Fasten the fastener to the motherboard with screws

1



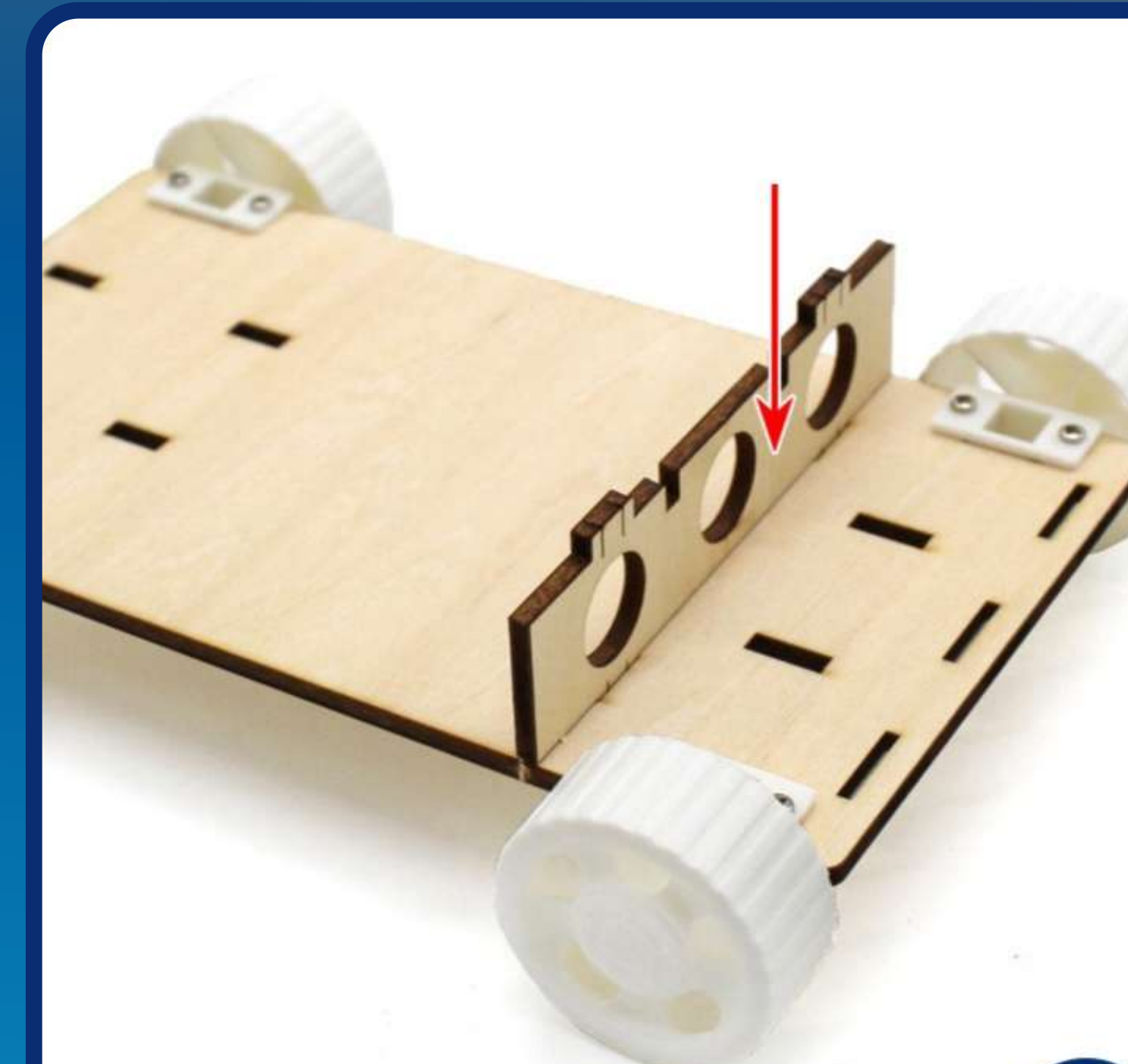
Attach the axle to the wheel

2



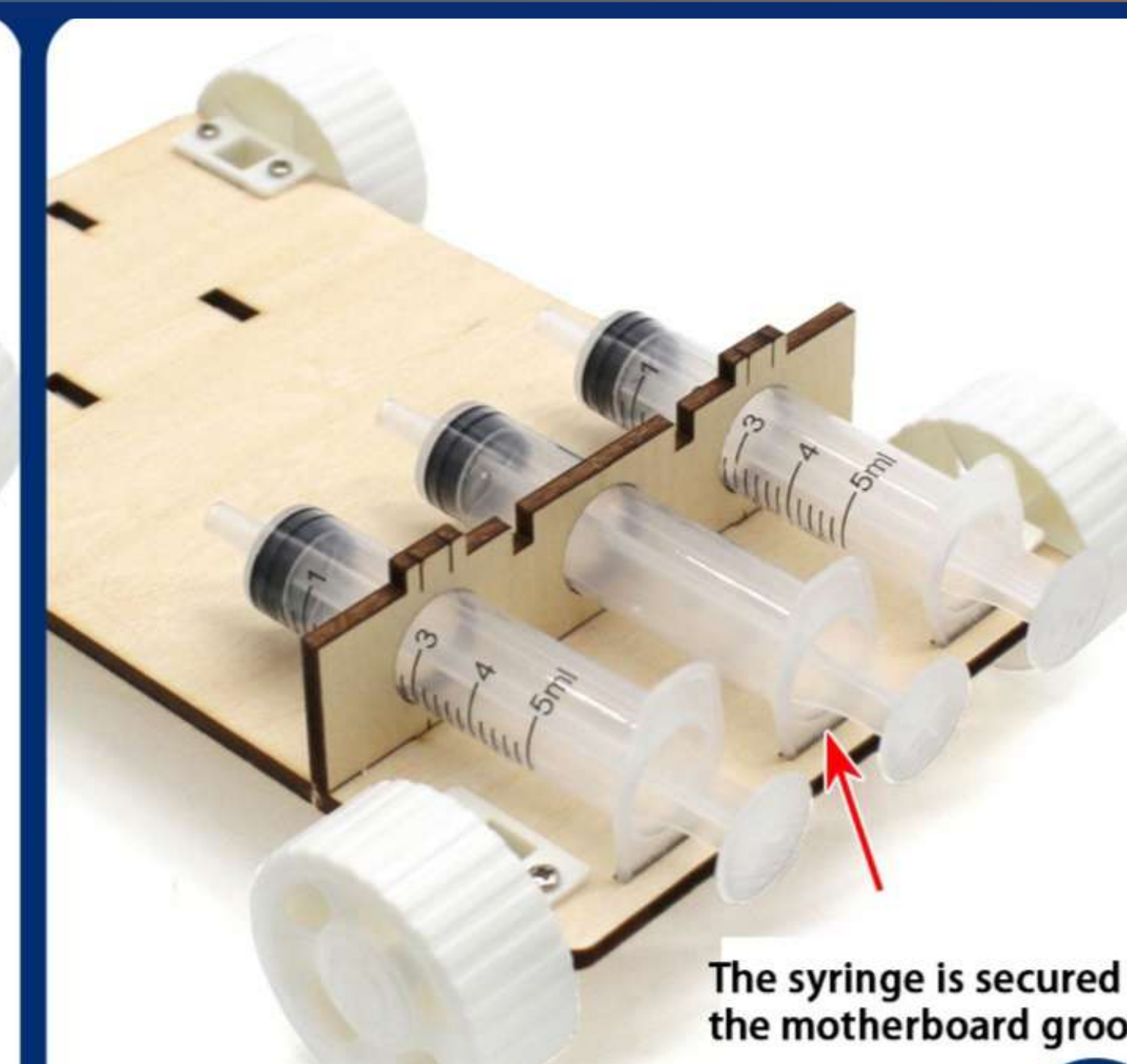
The axle passes through the fastener and fixes the axle sleeve to the axle

3



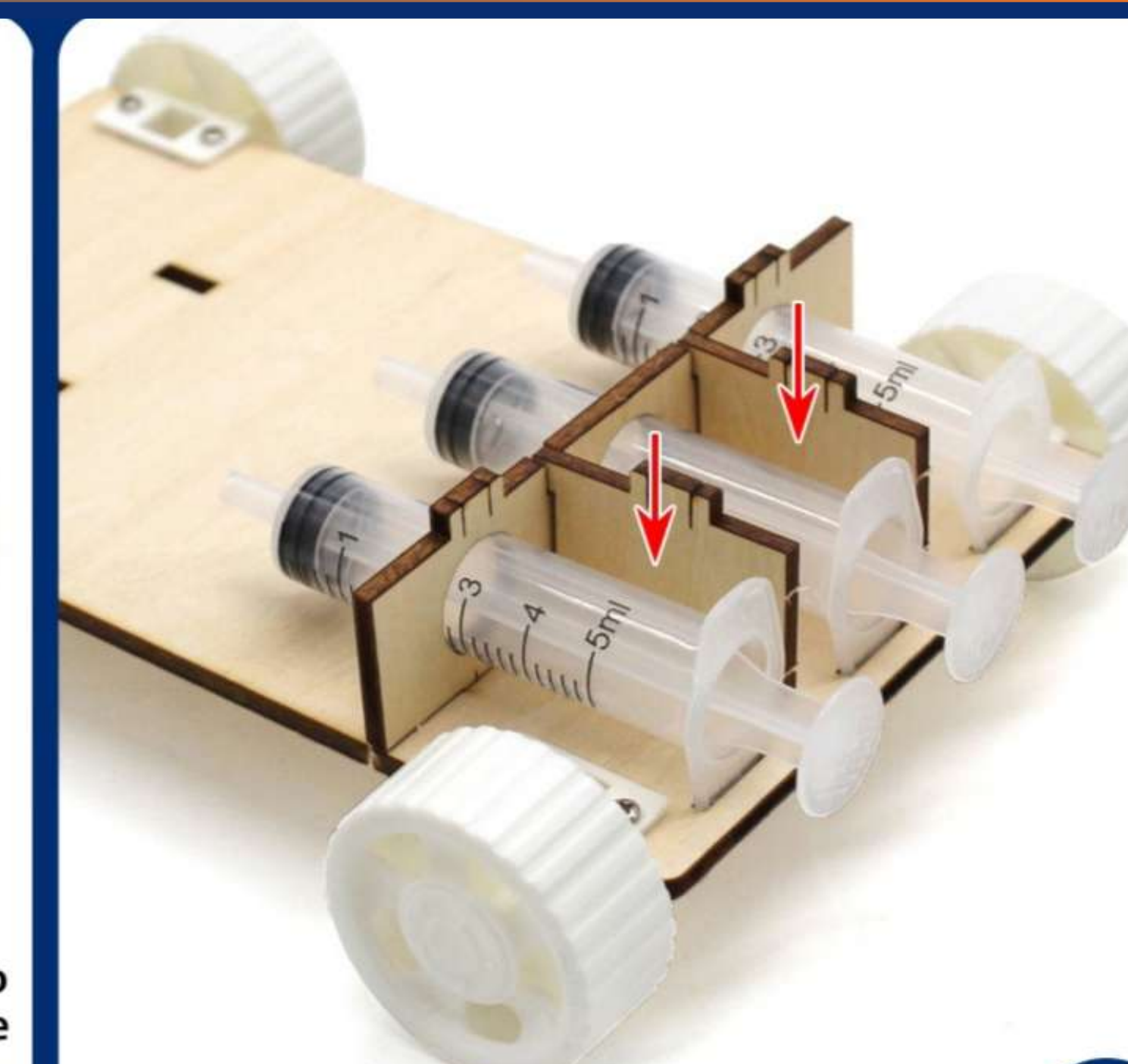
1-4 cards are attached to the motherboard

4



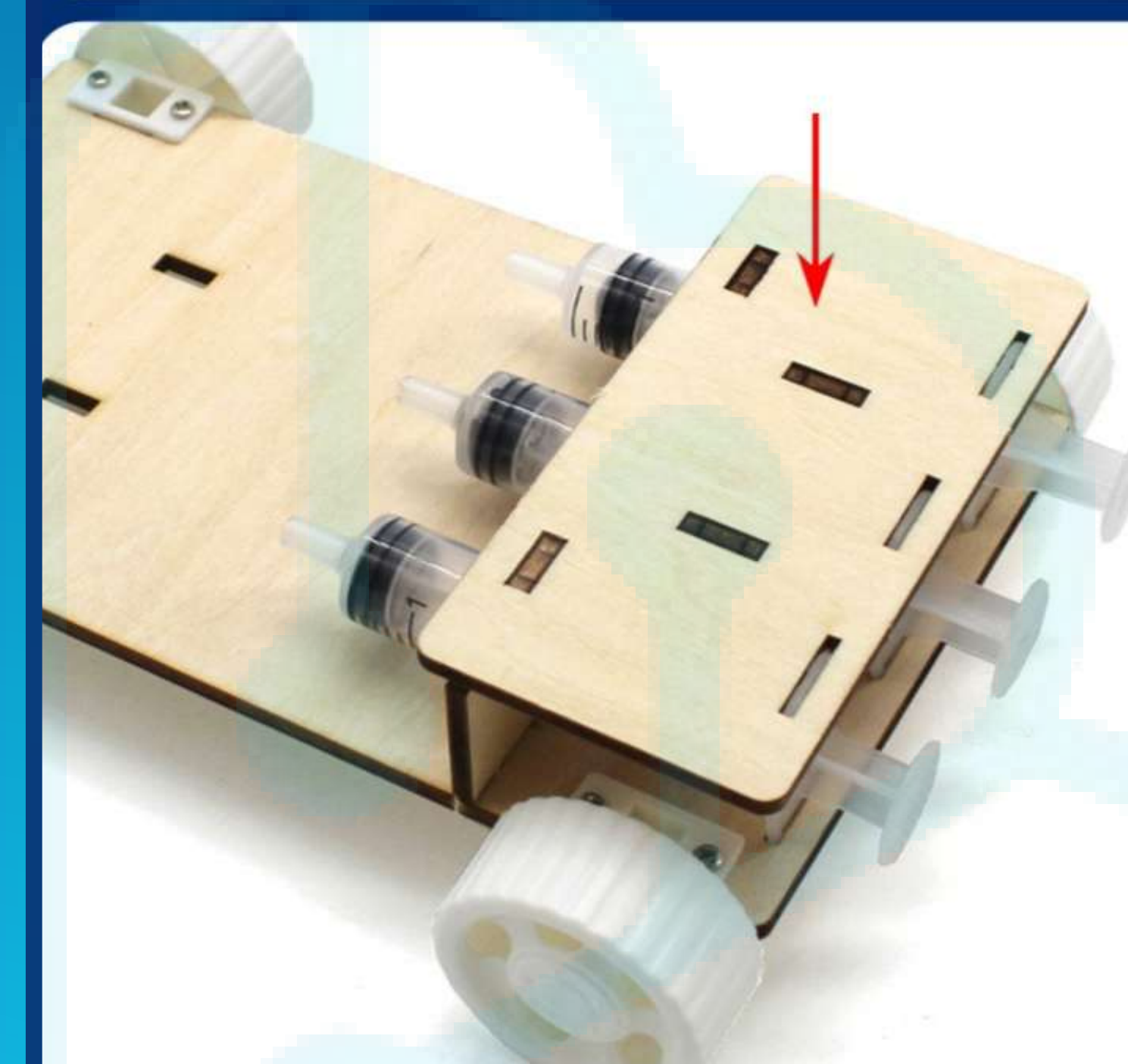
Fix the syringe on 1-4

5



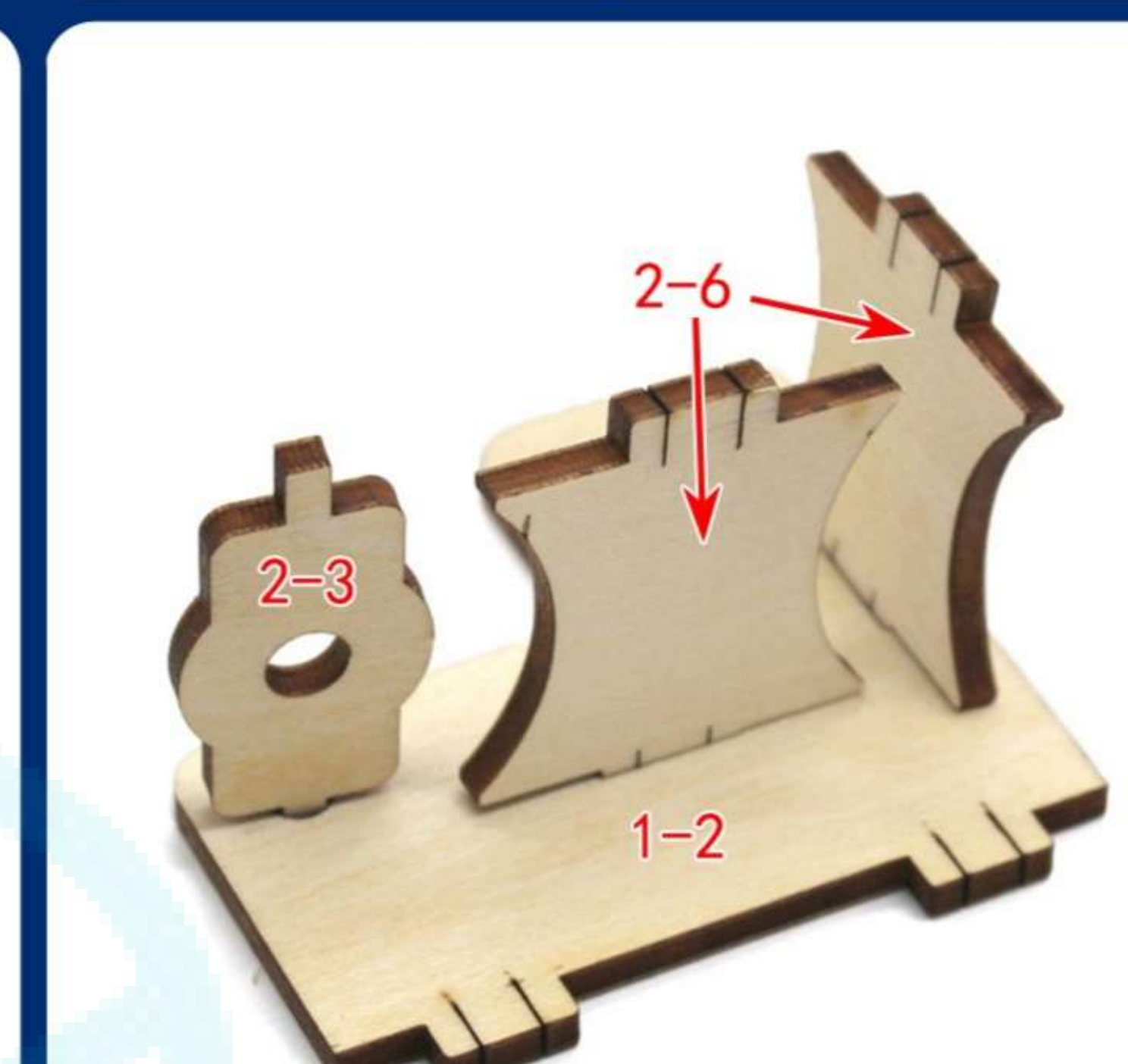
Stuck 2-1

6



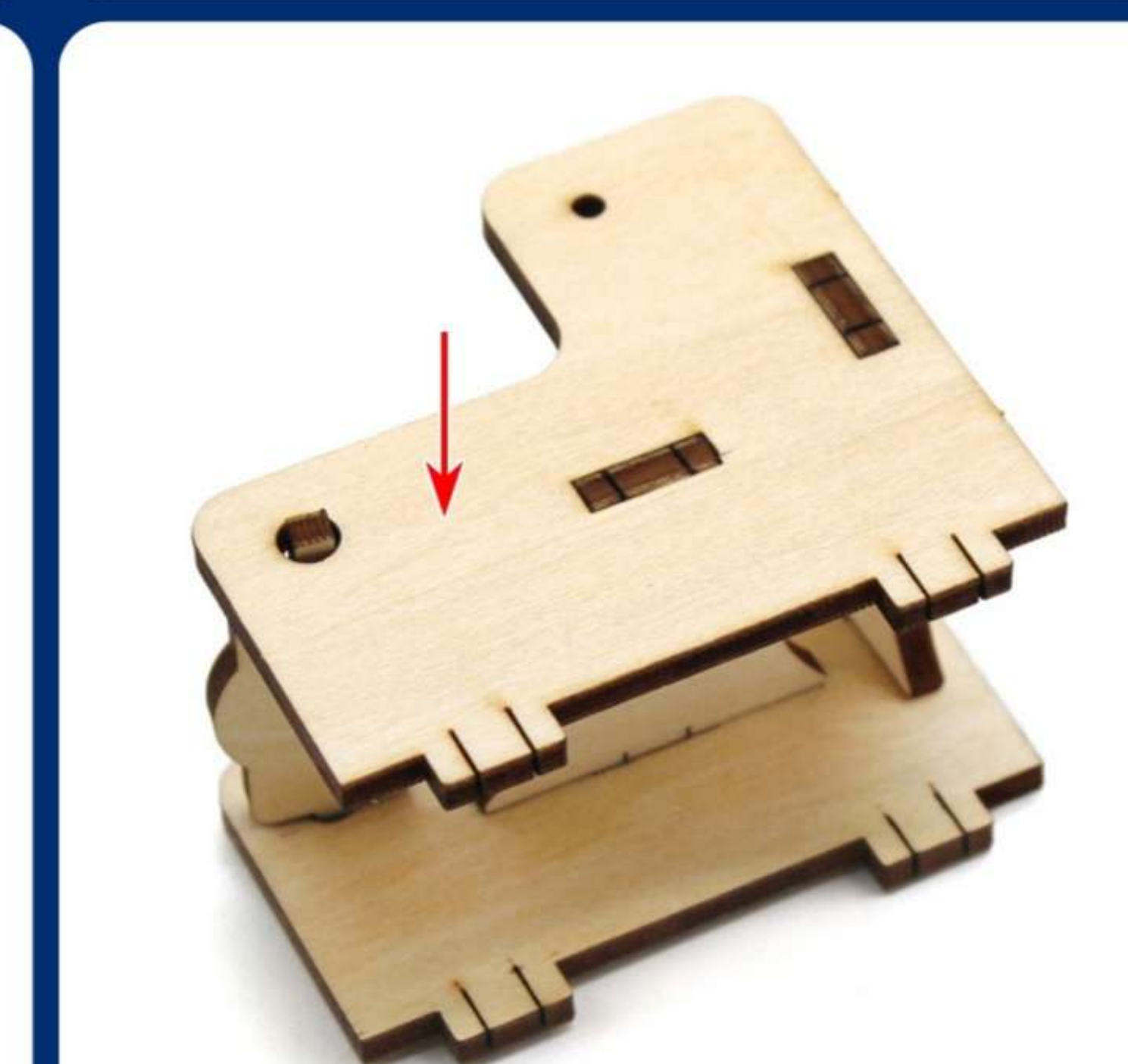
Stuck 1-6

7



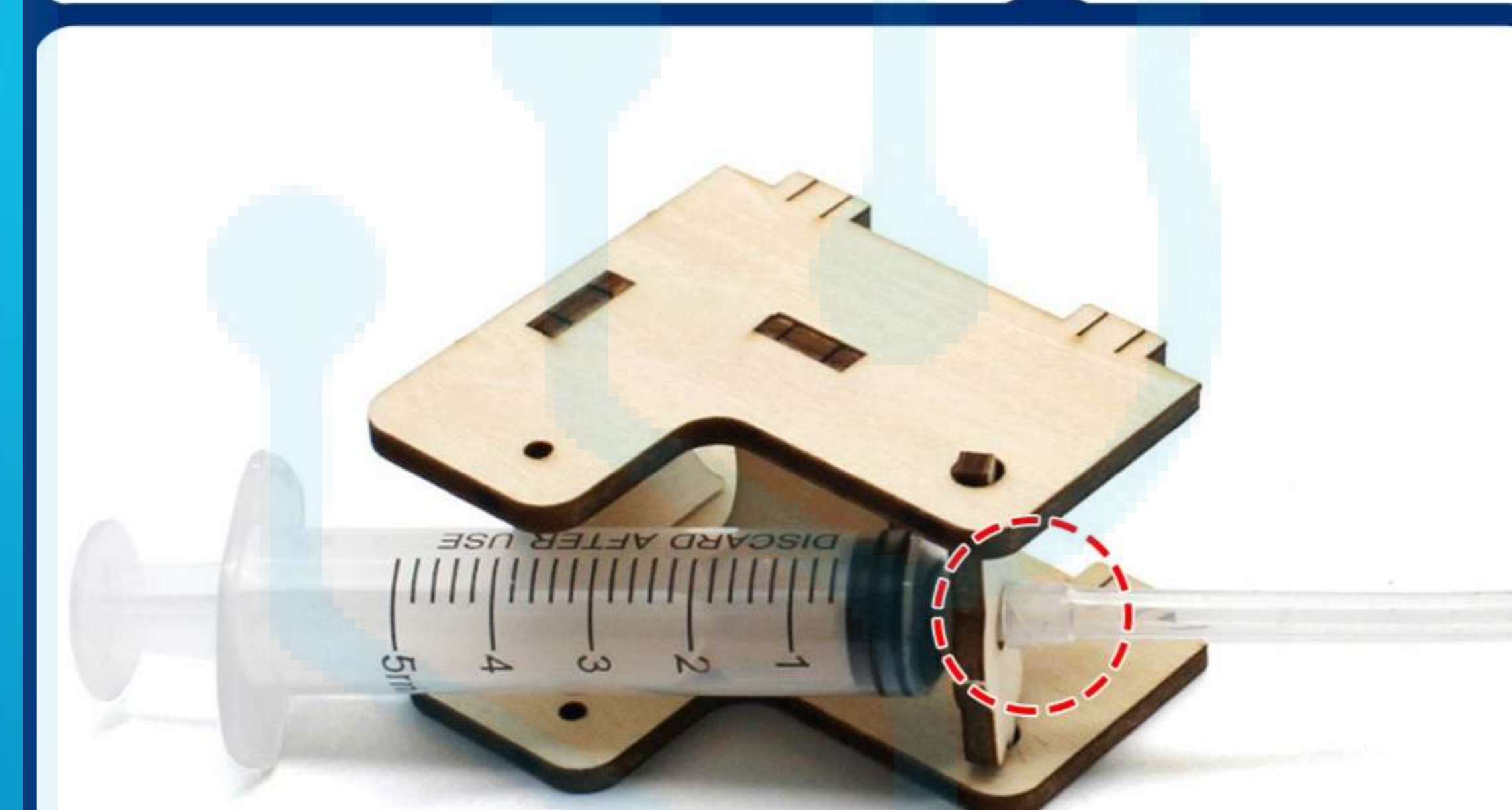
Clamp 2-3, 2-6 onto 1-2

8



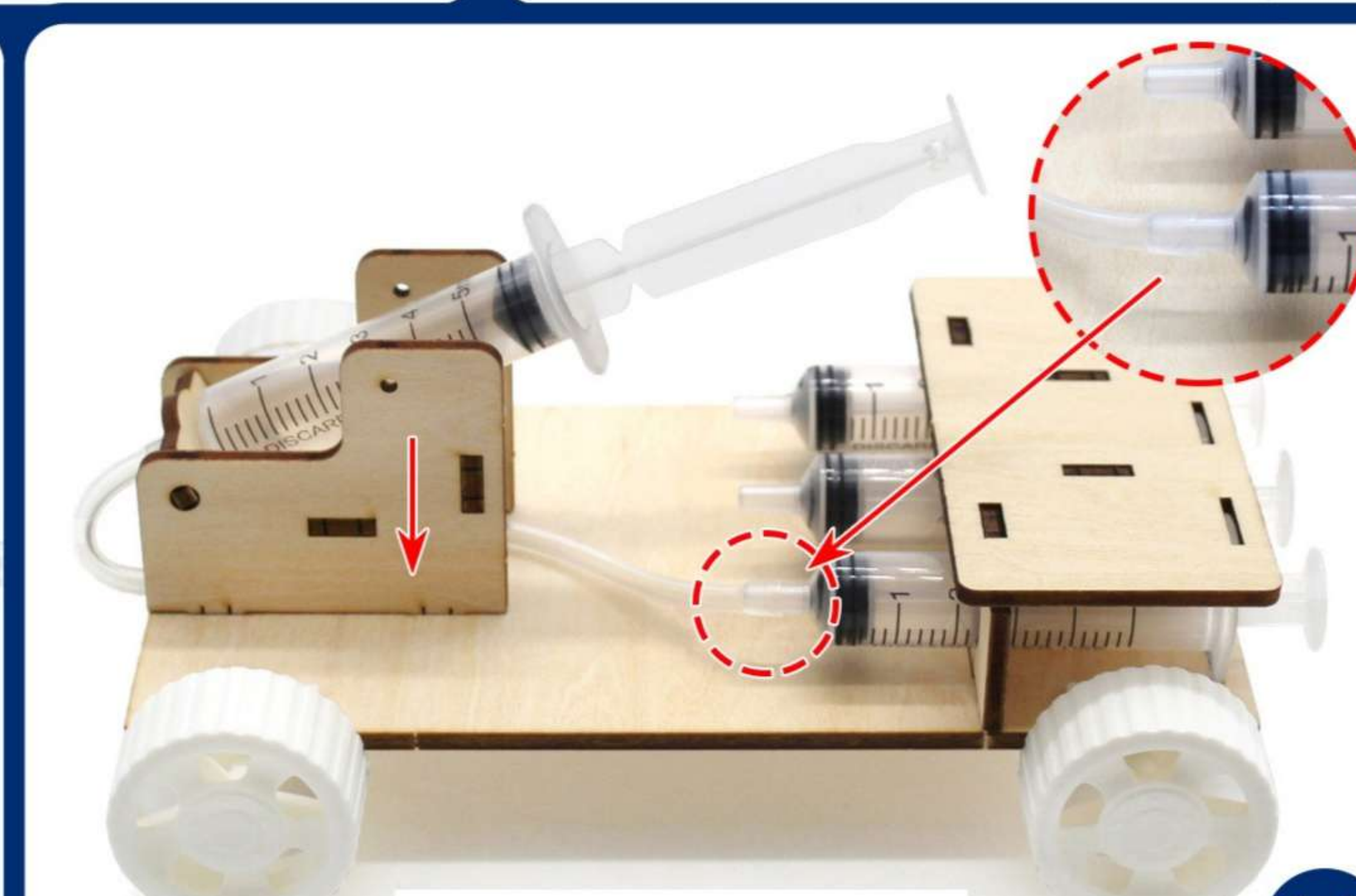
Stuck 1-2

9



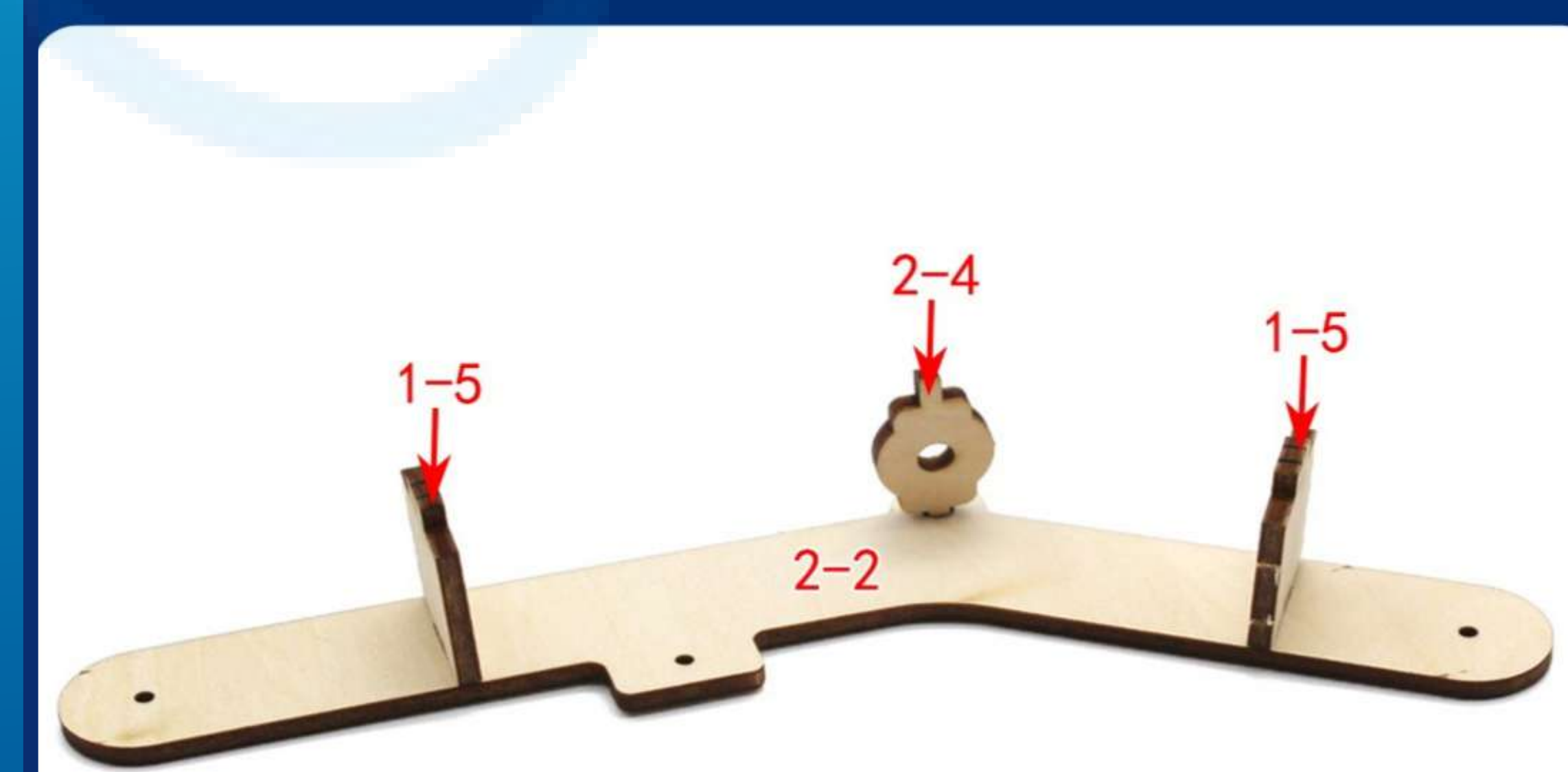
Fix syringe 2 at 2-3 and fix the short tube at the front end of the syringe

10



Clamp 1-2 to the motherboard and secure the hose to the front end of syringe 2 below

11



Clamp 1-5, 2-4 onto 2-2

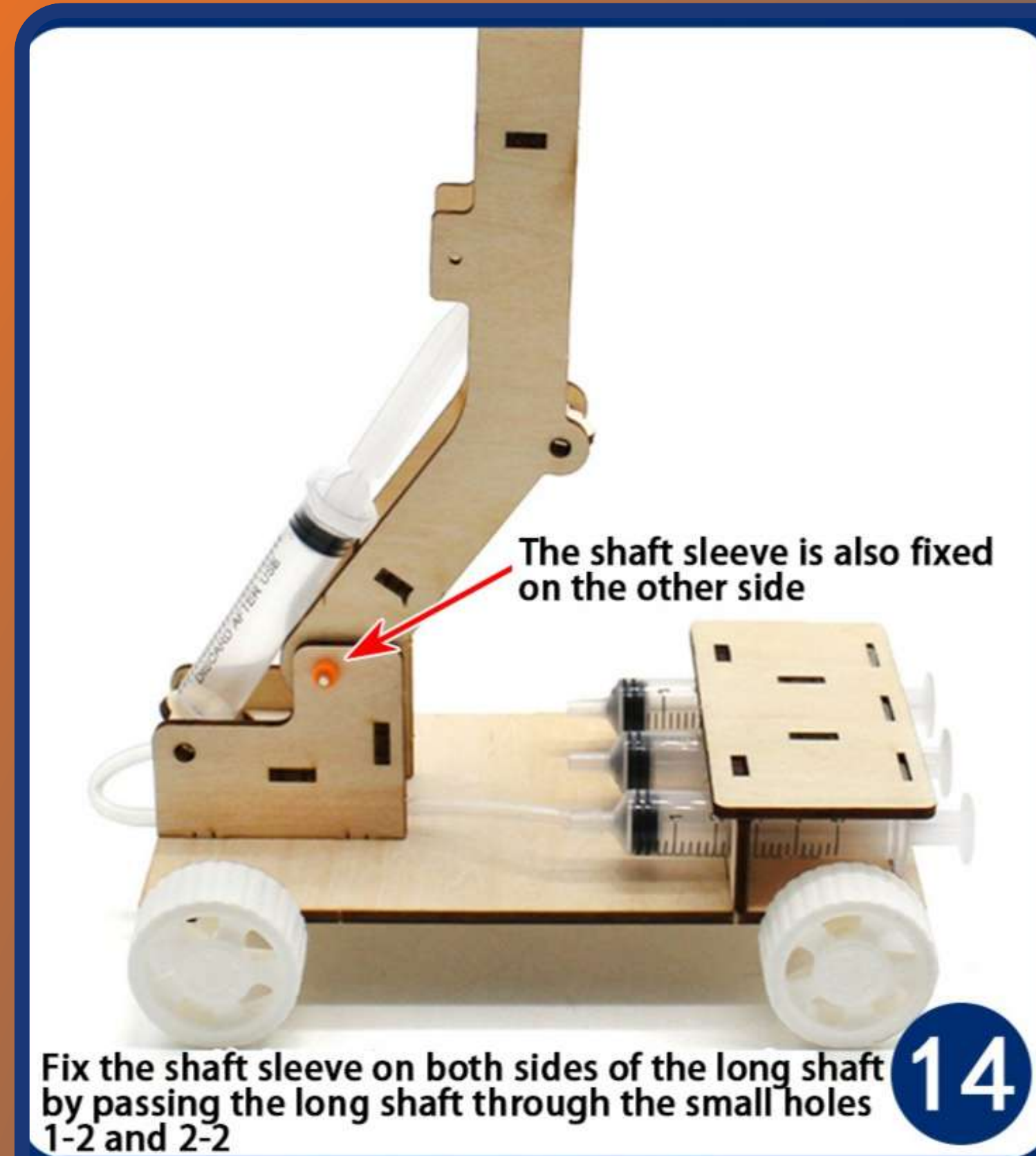
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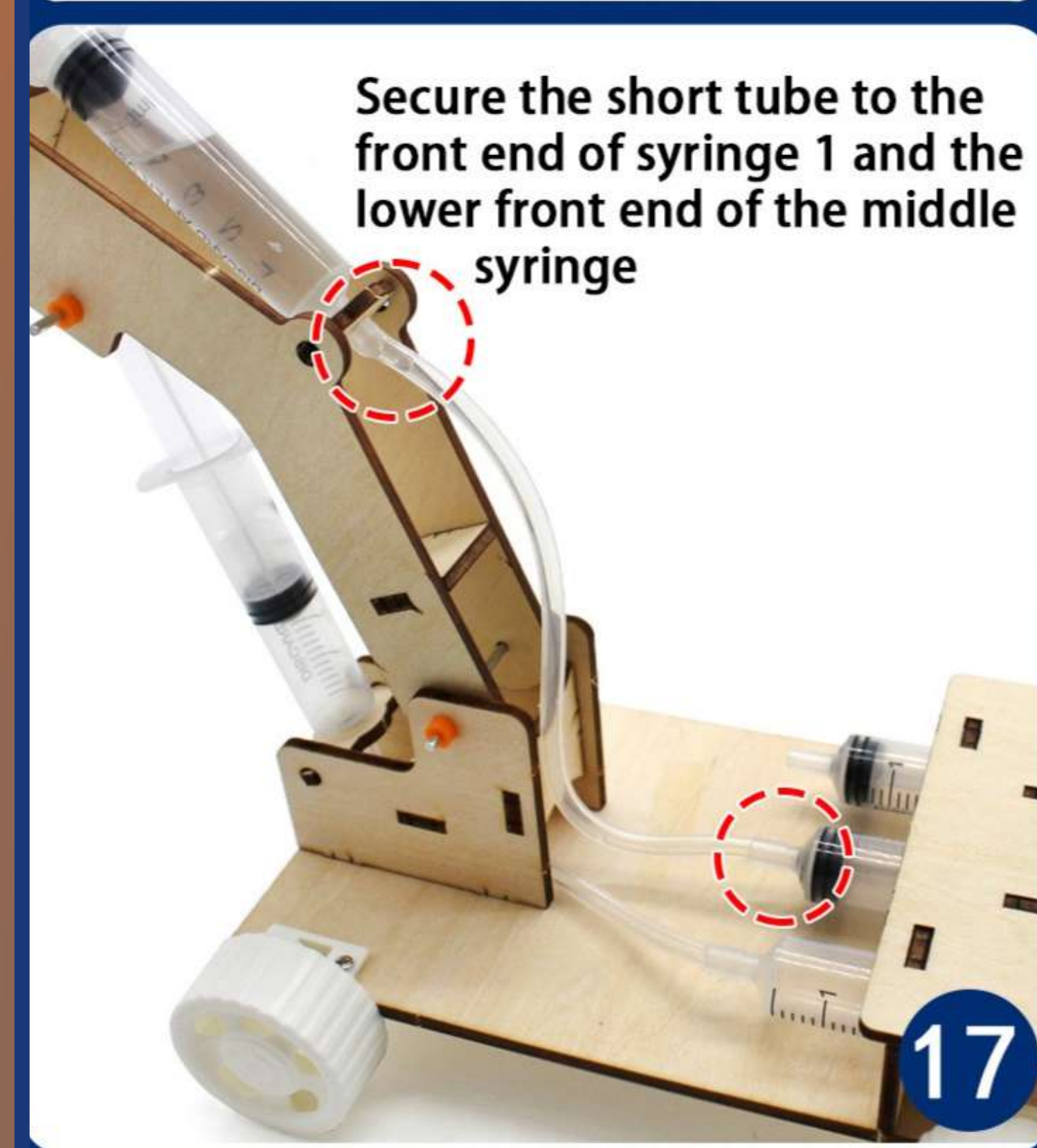
Stuck 2-2

13





14



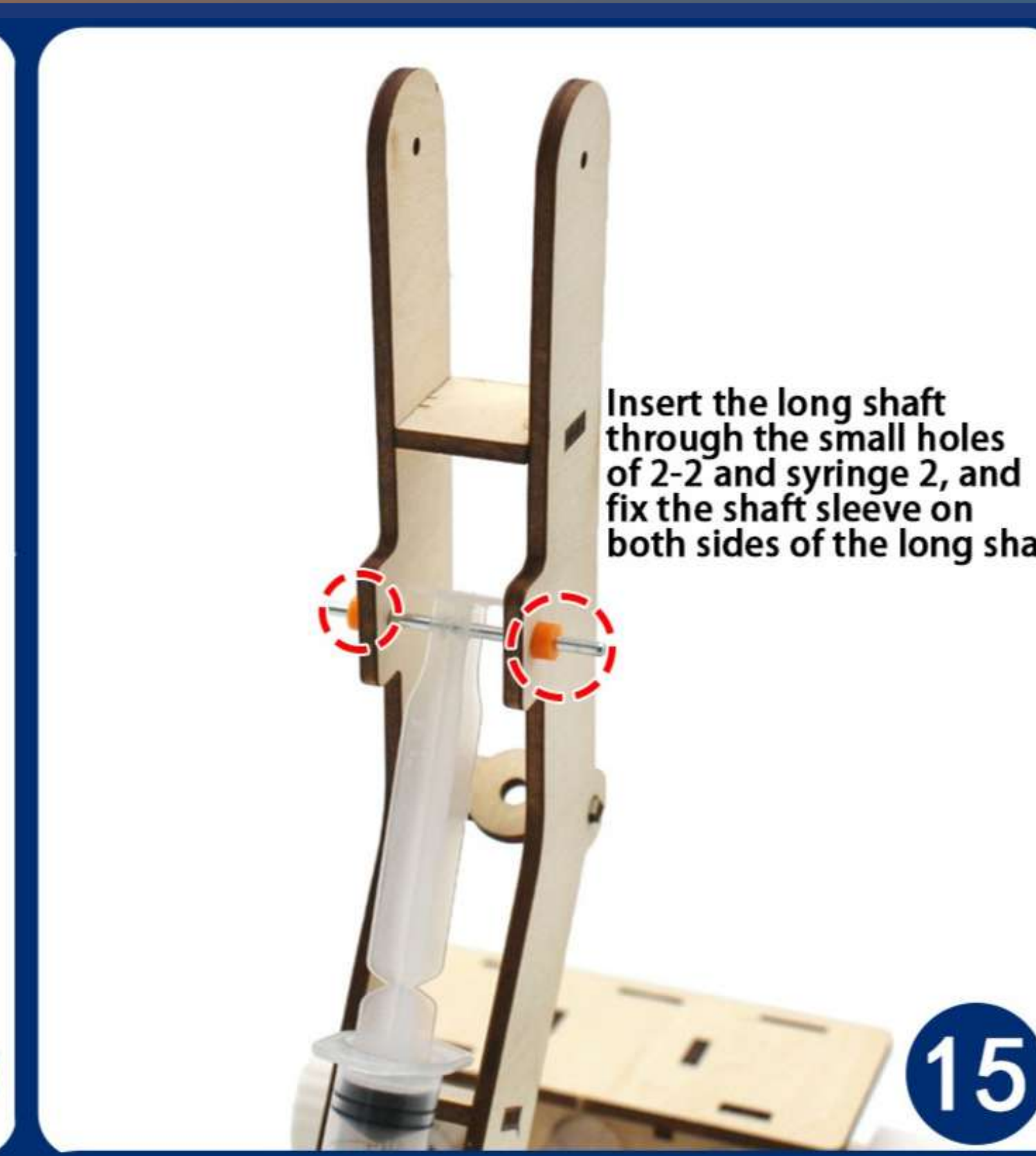
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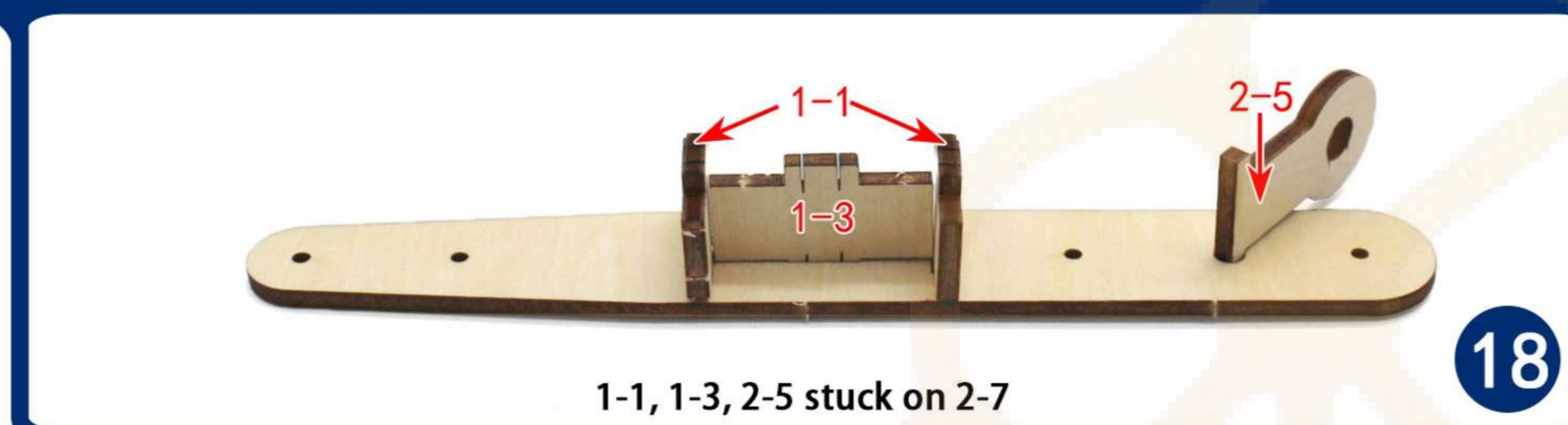
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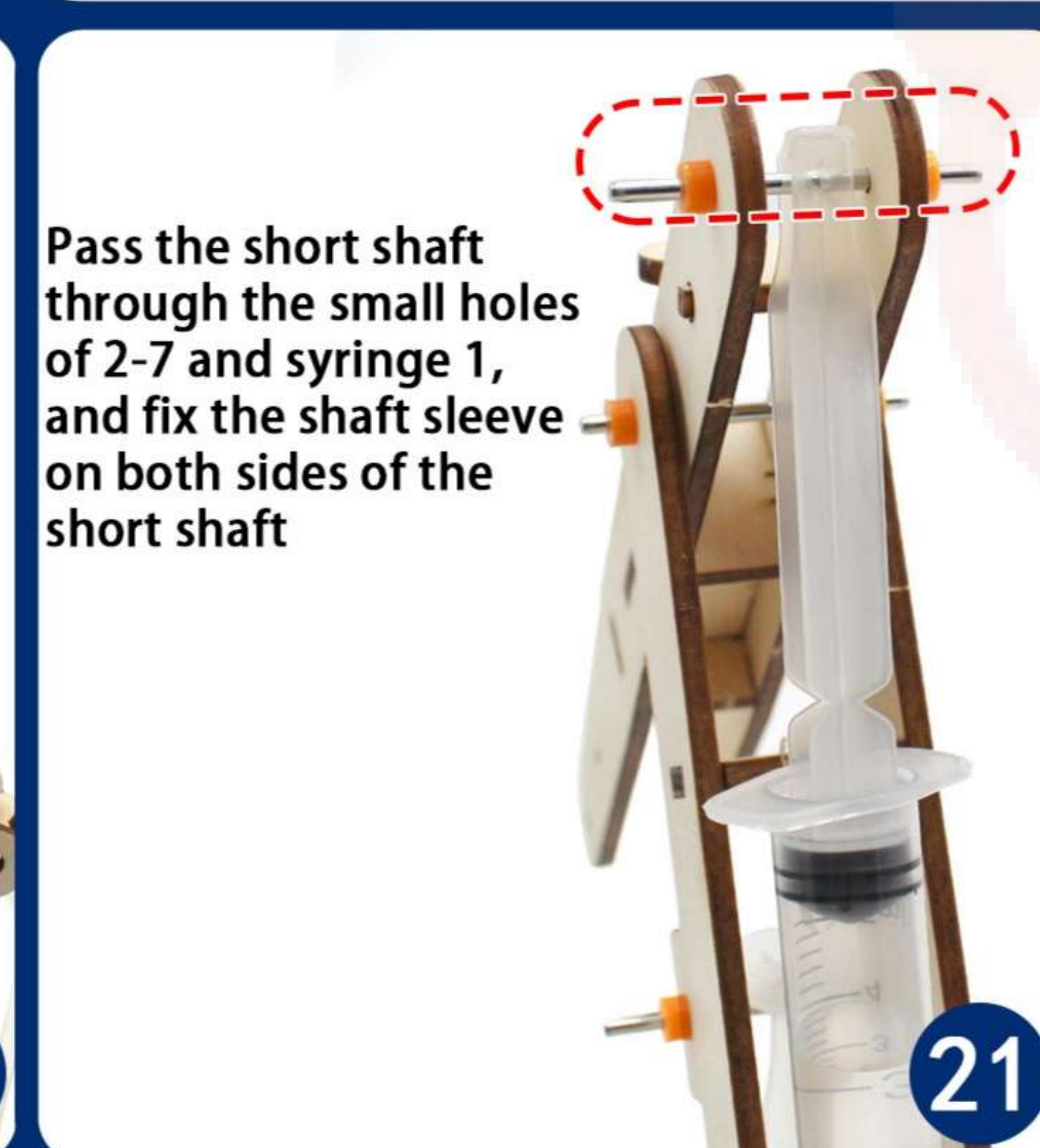
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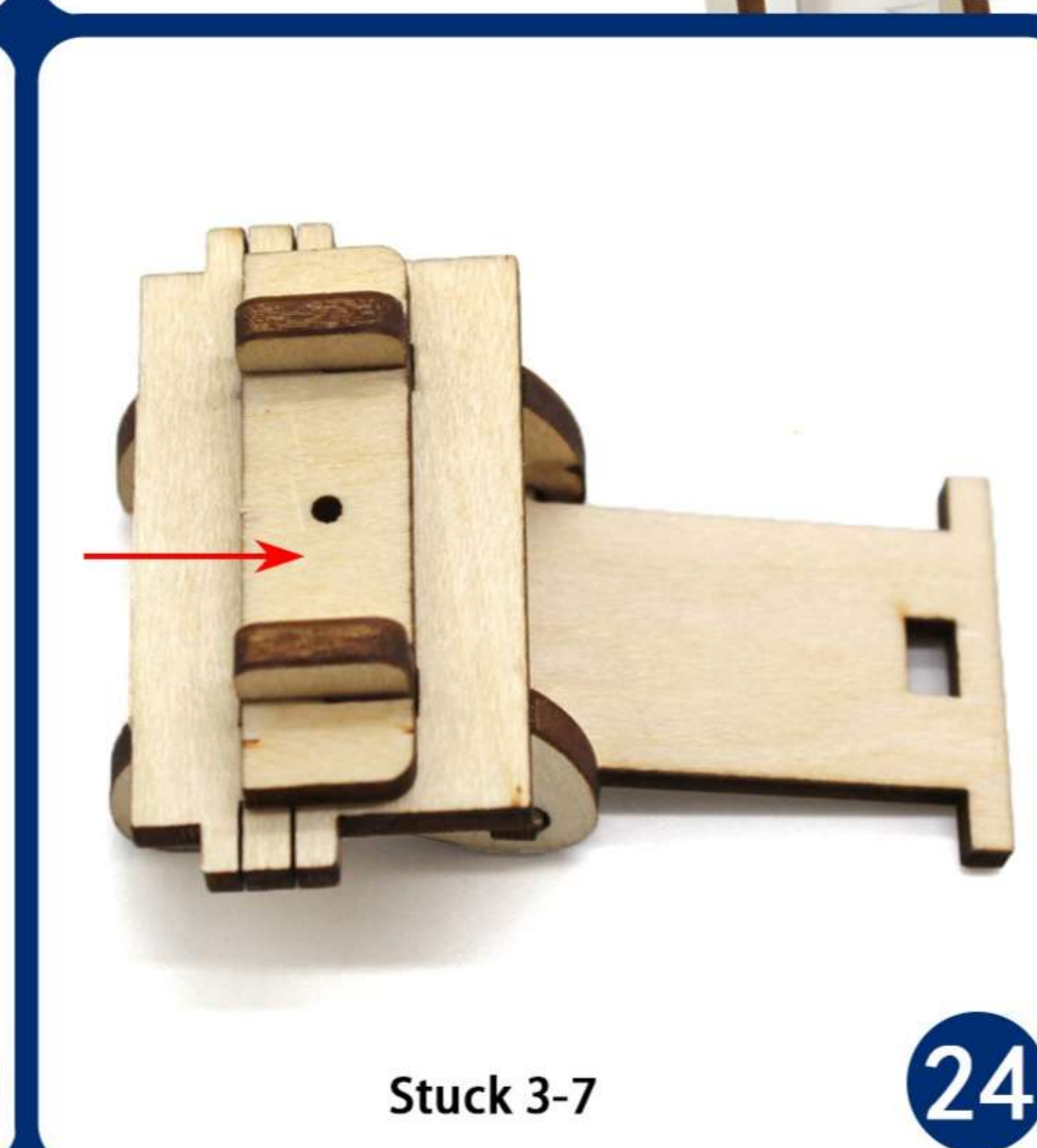
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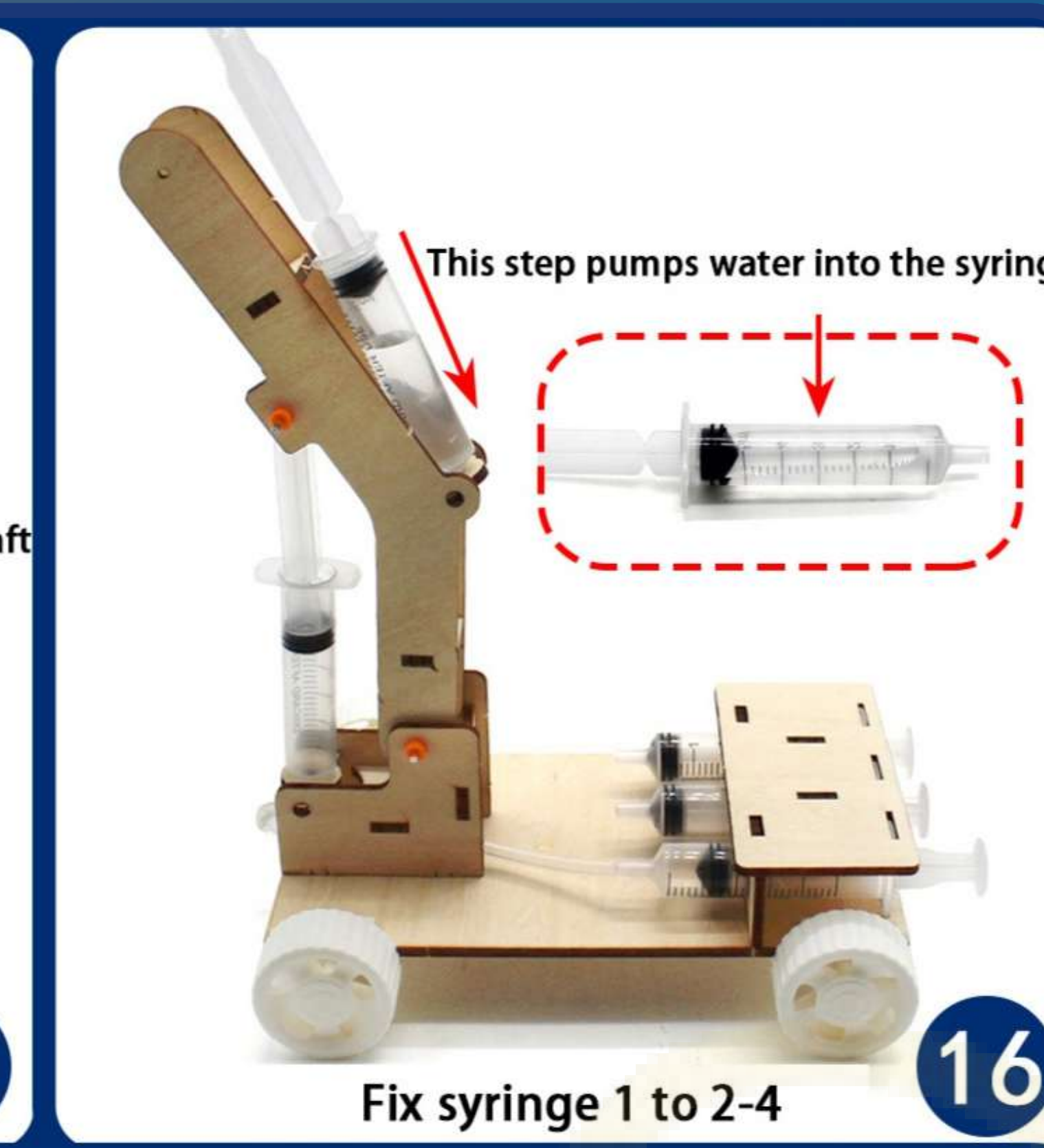
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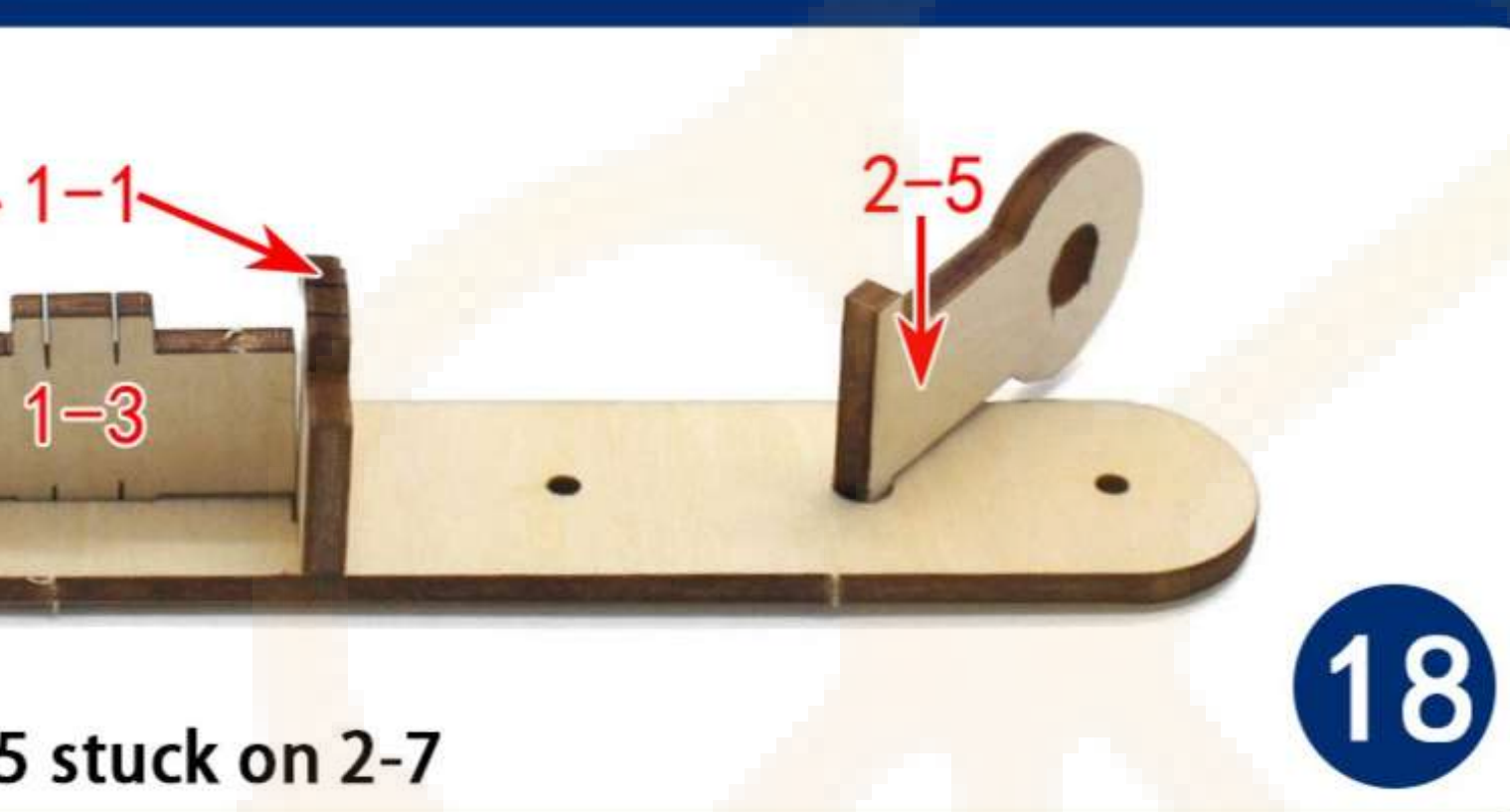
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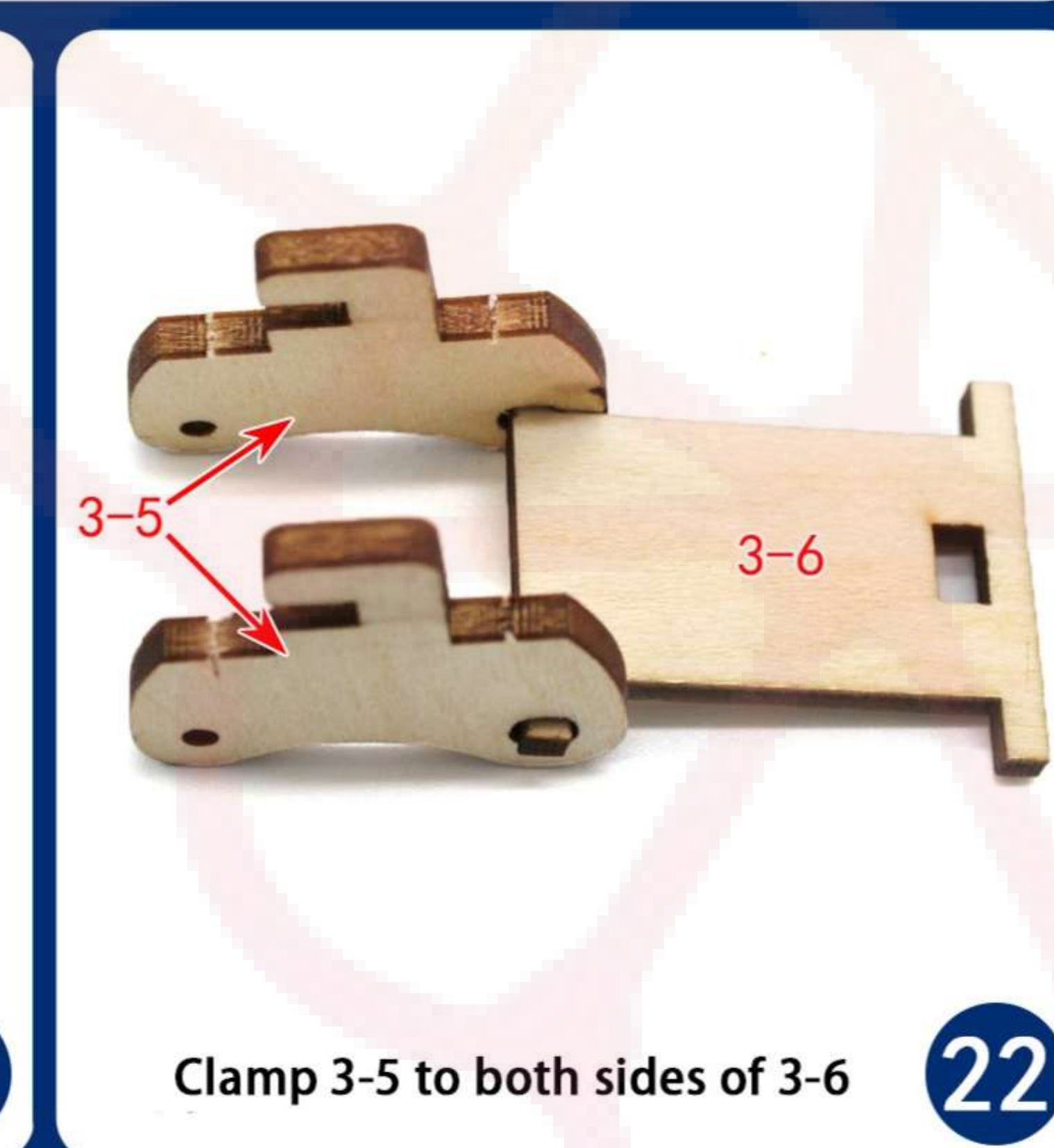
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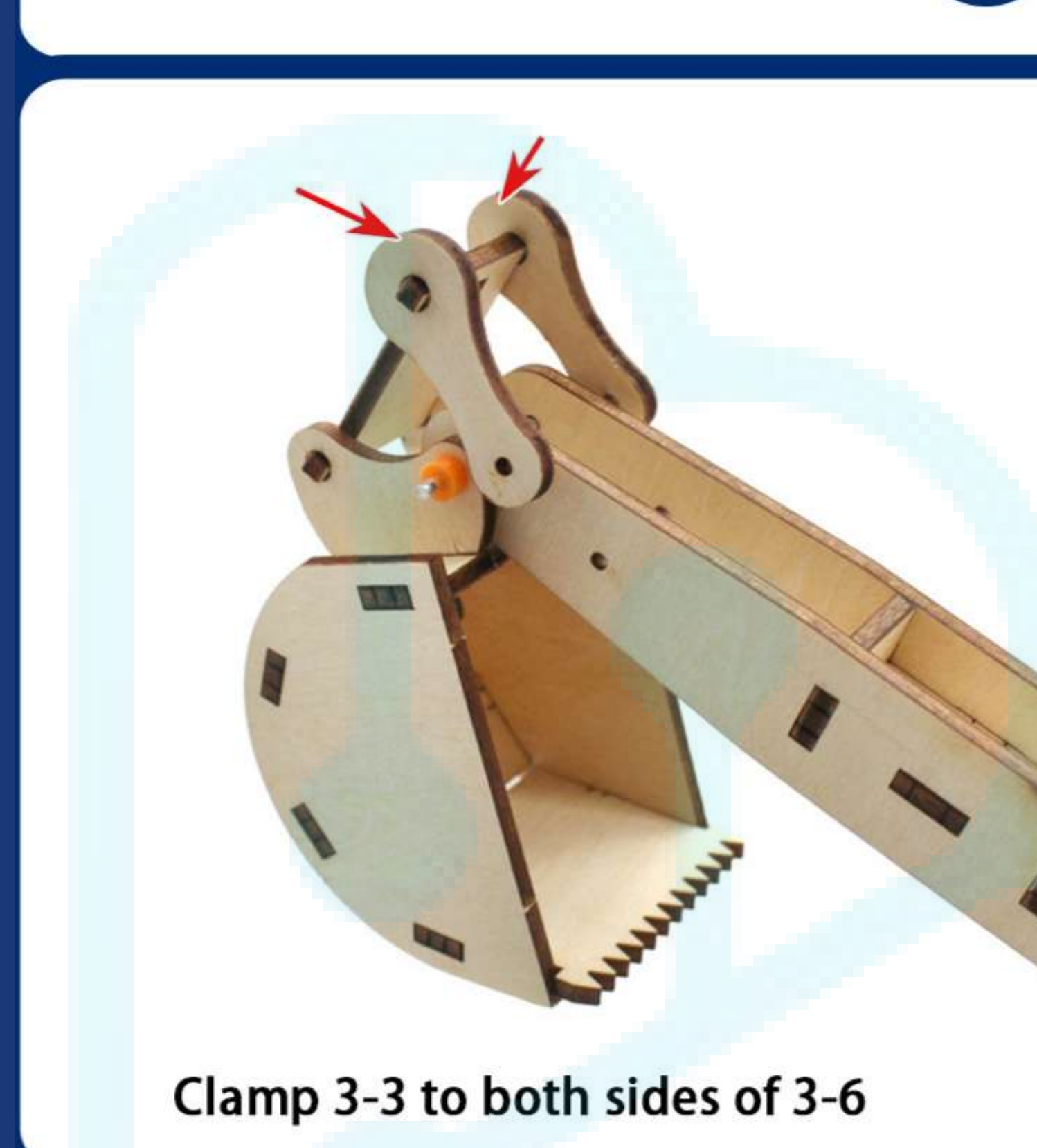
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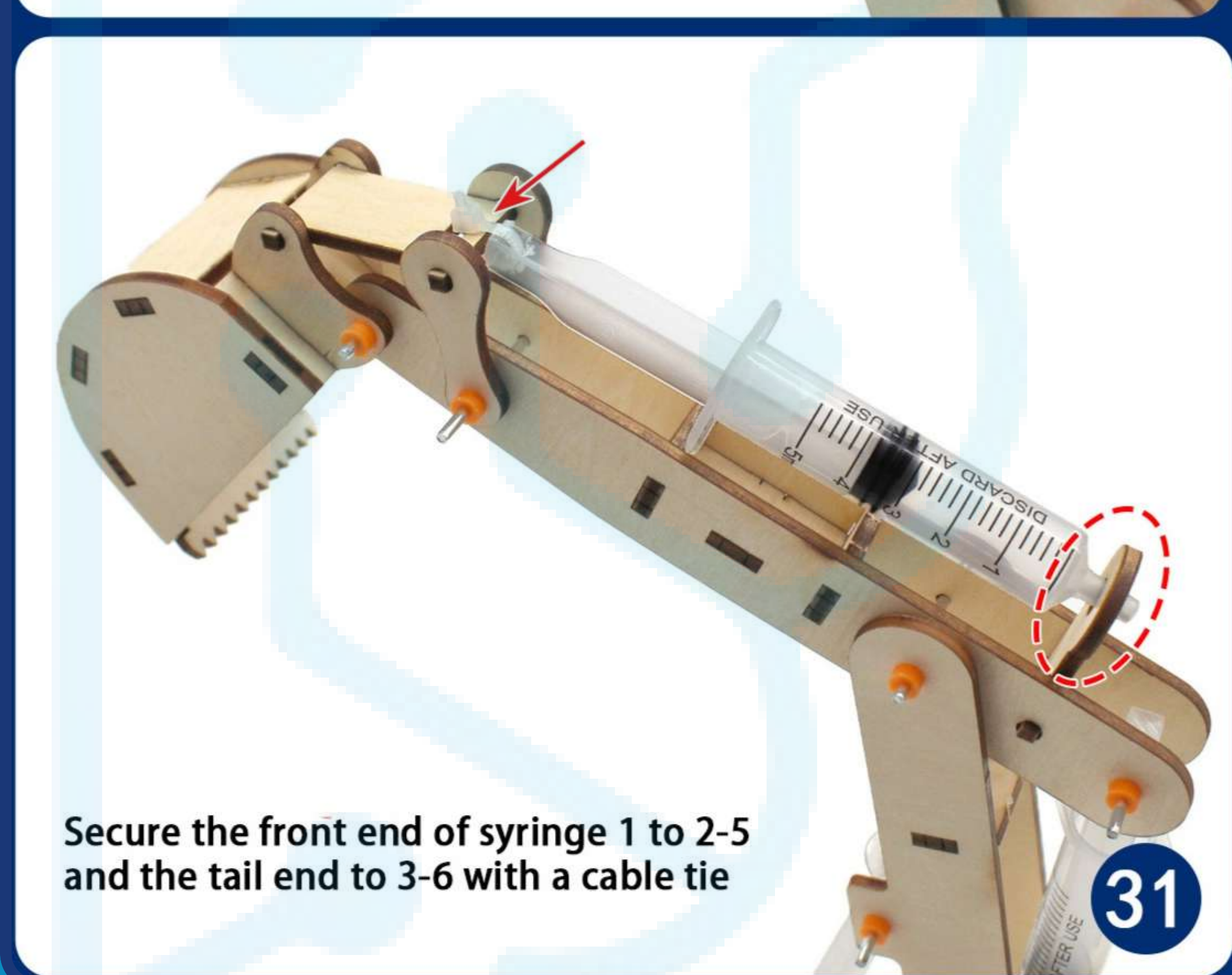
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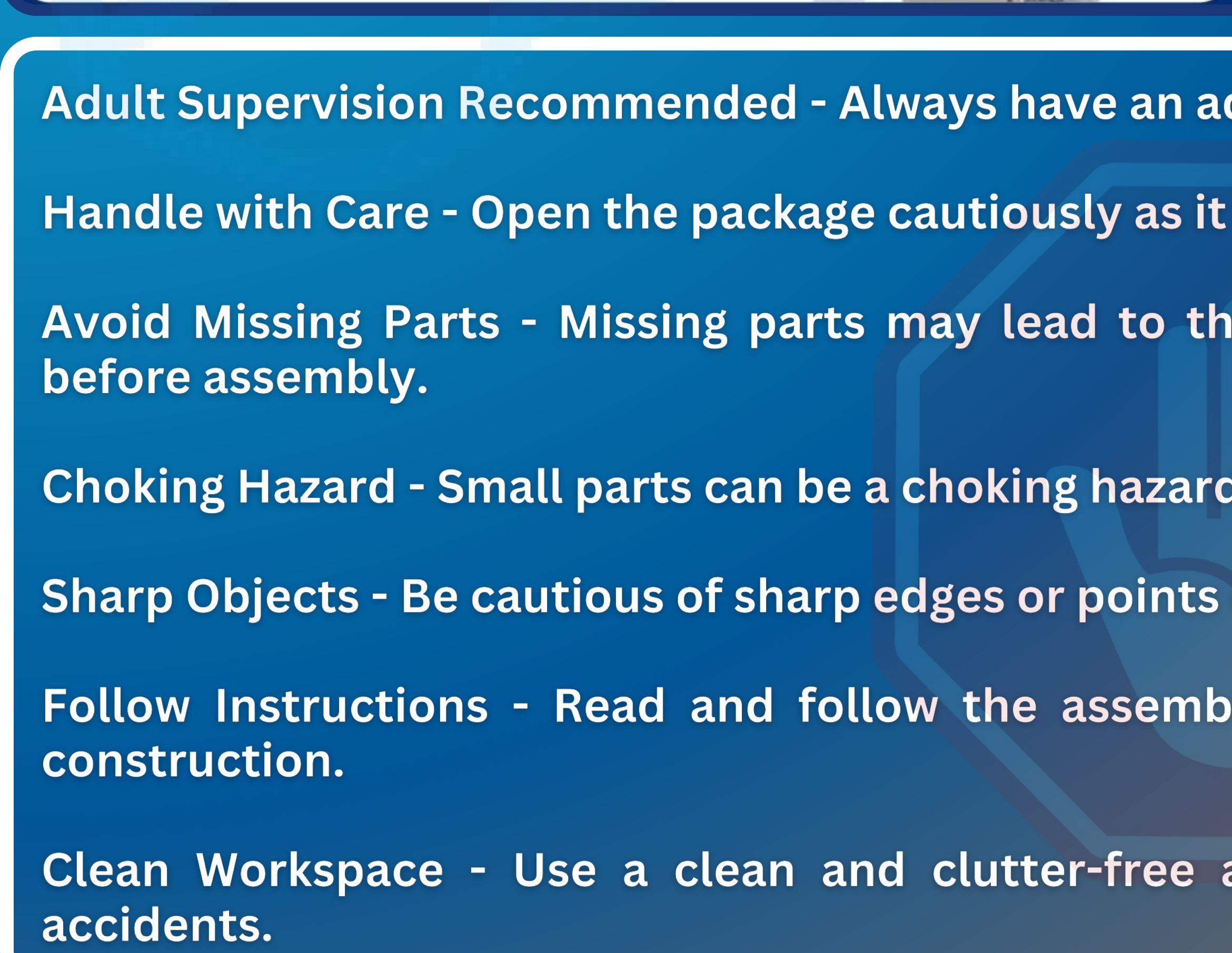
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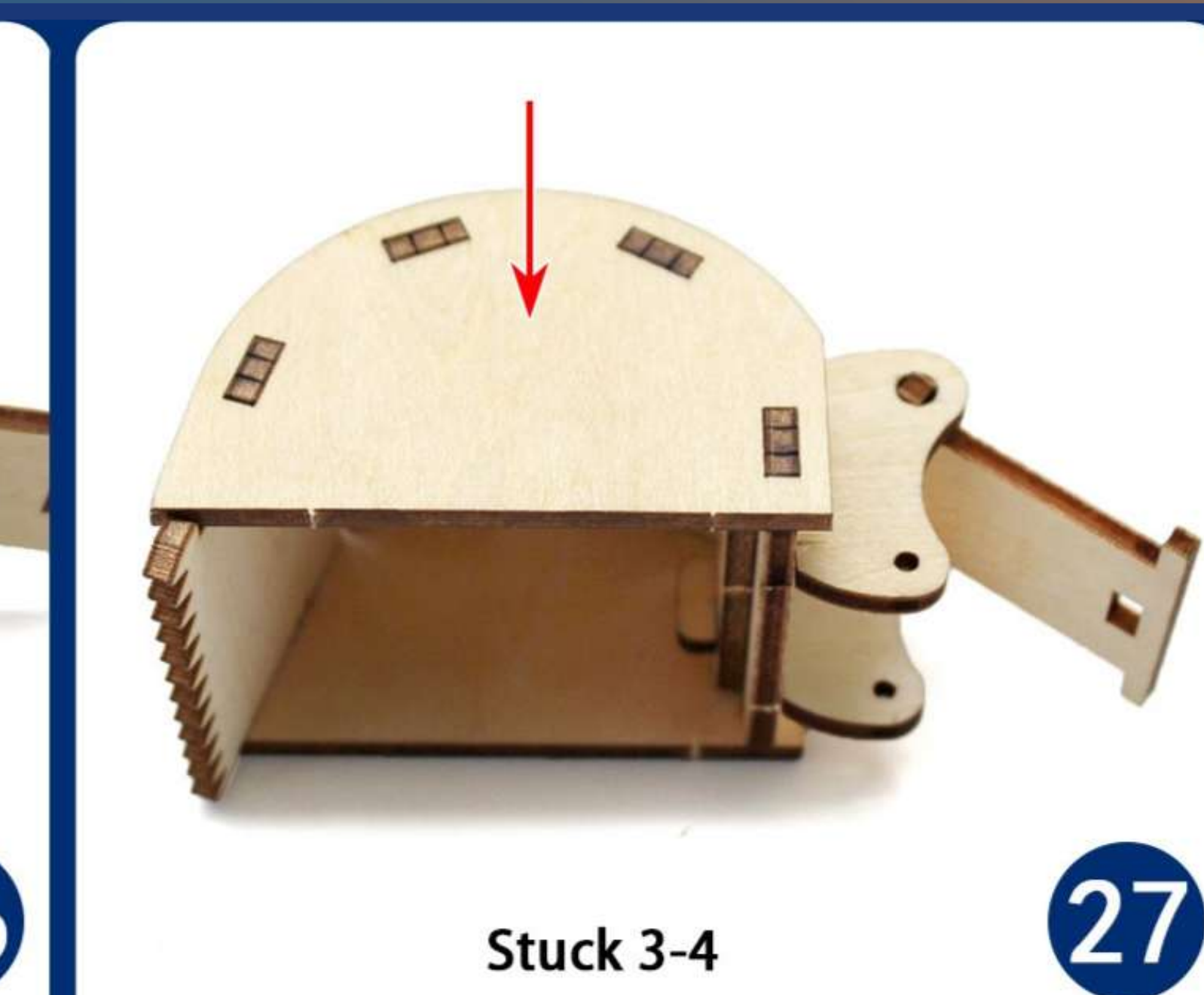
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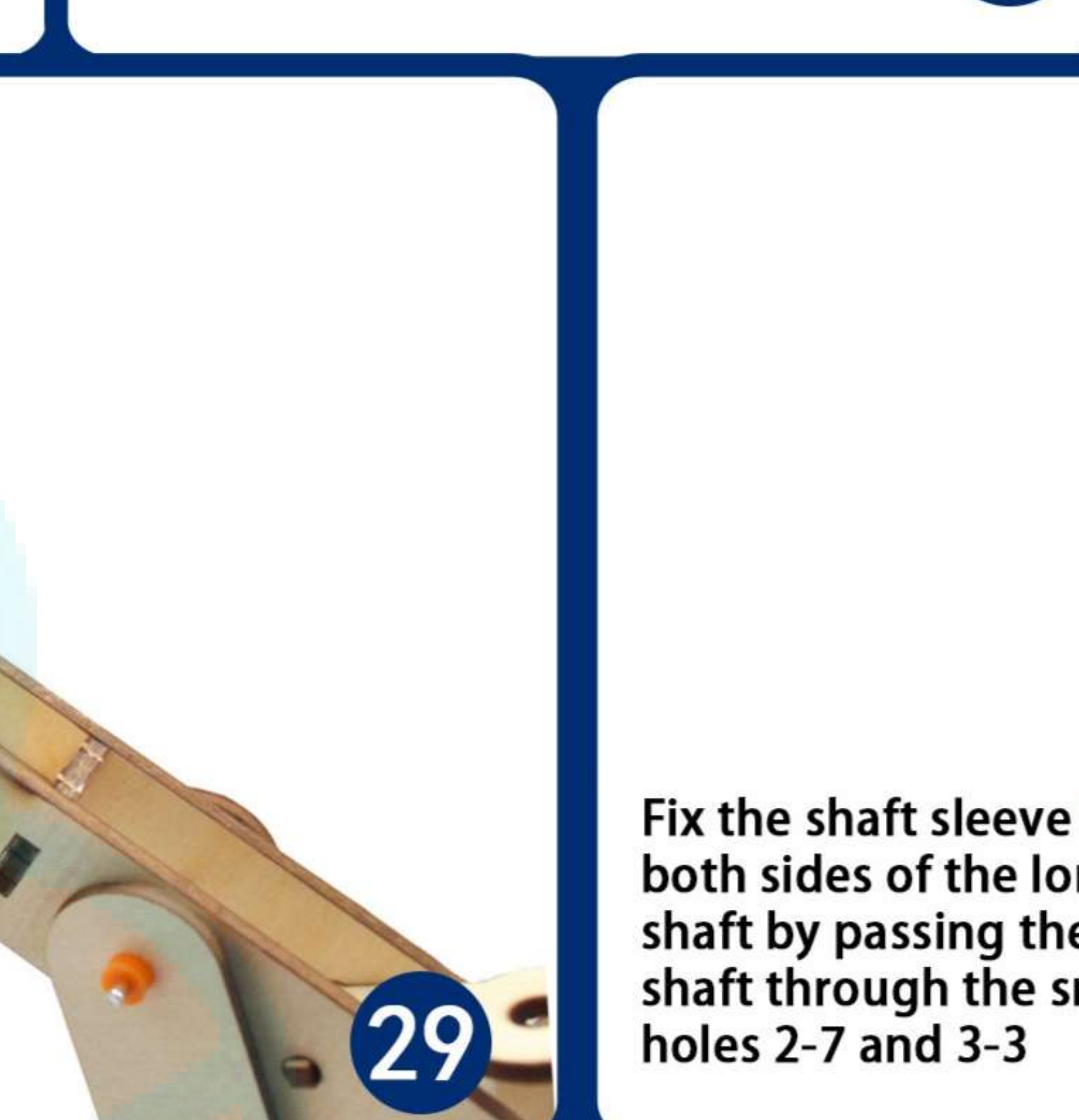
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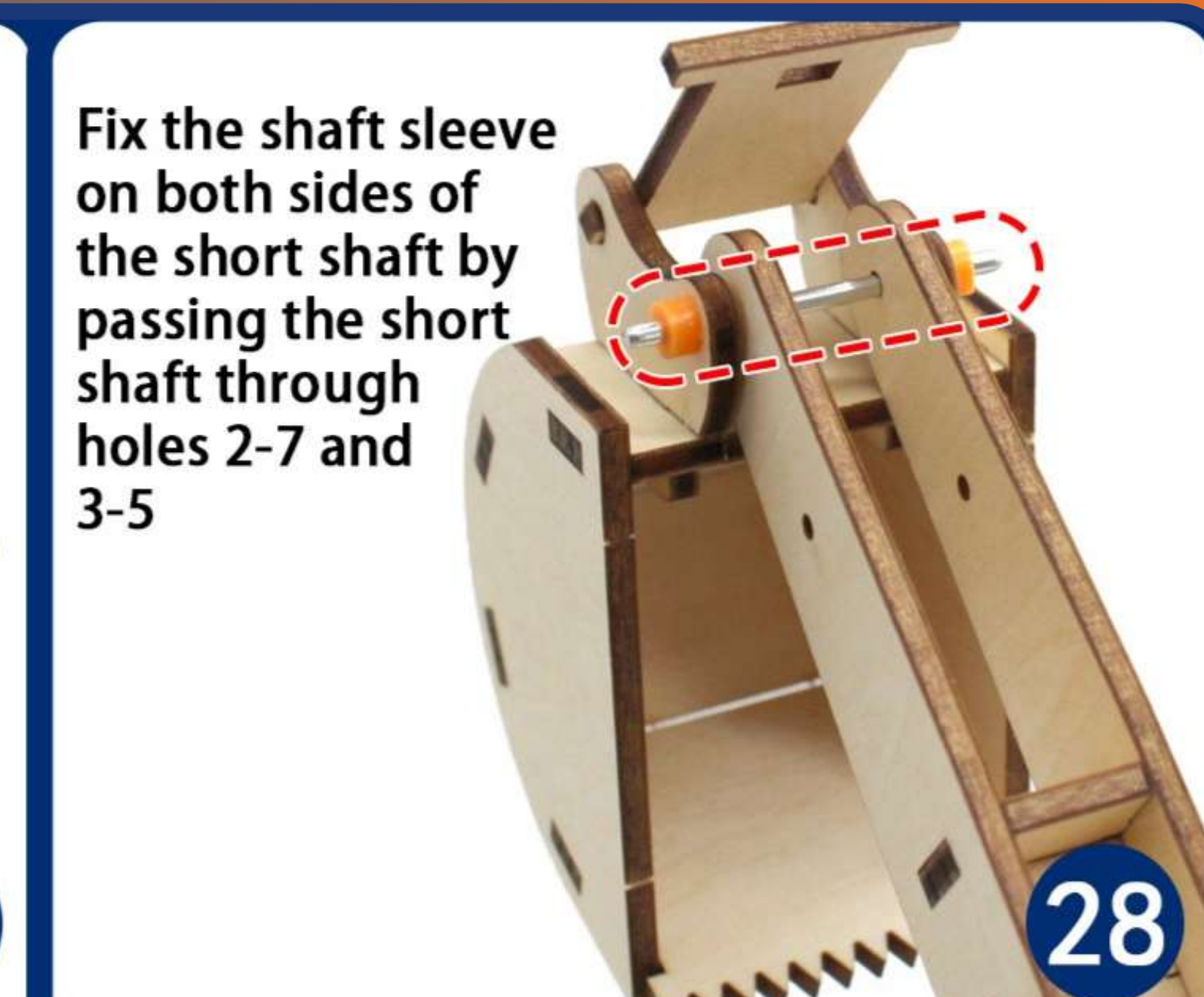
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Adult Supervision Recommended - Always have an adult present when assembling the toy.

Handle with Care - Open the package cautiously as it contains small parts that could be easily lost.

Avoid Missing Parts - Missing parts may lead to the toy malfunctioning. Double-check all components before assembly.

Choking Hazard - Small parts can be a choking hazard for young children. Keep them out of reach.

Sharp Objects - Be cautious of sharp edges or points on parts. Handle with care to avoid injury.

Follow Instructions - Read and follow the assembly instructions carefully to ensure safe and proper construction.

Clean Workspace - Use a clean and clutter-free area for assembly to avoid losing parts or causing accidents.