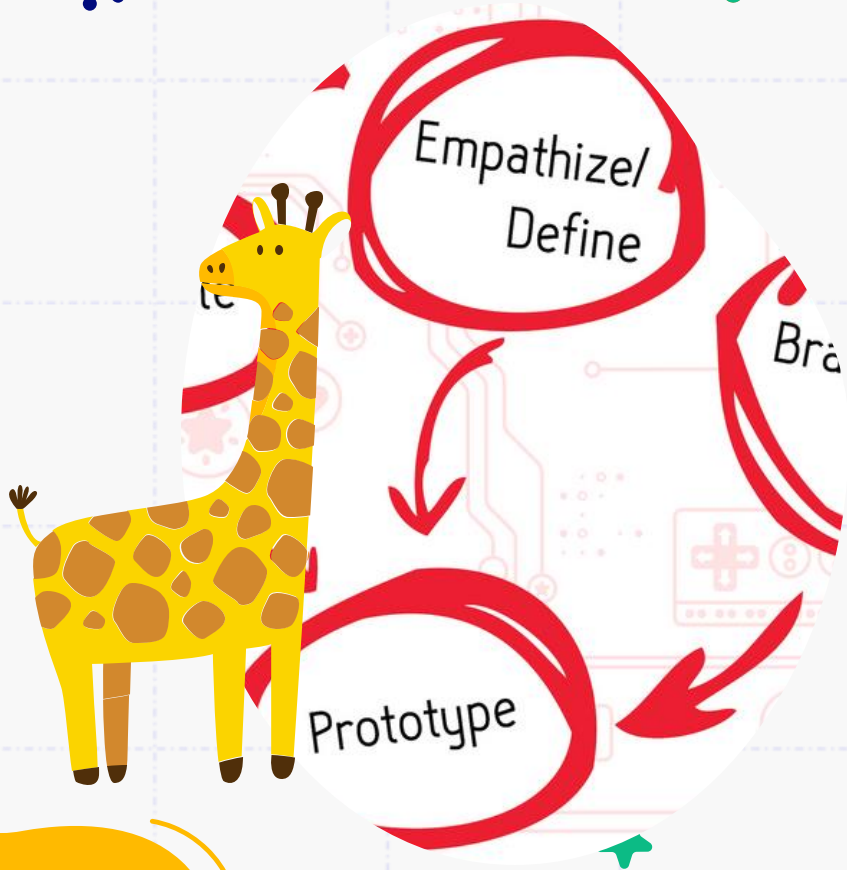
Salt Water Powered Car

GREENRIDGE PRIMARY SCHOOL

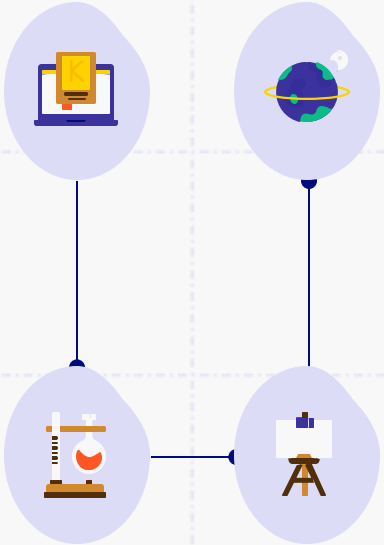


Design Thinking for Invention

Design Thinking for Invention

1. Empathize

Develop a deep understanding of the challenge



4. Prototype

Design a prototype for your solution

2. Define

Clearly articulate the problem you want to solve

3. Ideate/Brainstorm

Brainstorm potential solutions
Select and develop your solution

Design Thinking for Invention

See	Observe the different types of car available. What makes them move?
Think	Fossil fuel vs alternative renewable energy sources. What are the advantages of using alternative renewable energy sources ?
Wonder	How can salt water be used to power a car?
Discuss	Share your observations and insights with the class.

1. Empathize

Discuss and map out the needs of someone who might use a saltwater-powered car, e.g. people living along coastal areas.

2. Define

Formulate a problem statement, e.g., "How might we create a small-scale, educationally relevant saltwater-powered car model using available materials?"

3. Ideate/Brainstorm

Explore different designs and mechanisms for harnessing energy from saltwater How would energy be produced? Would it be enough to power a car?

4. Prototype

Build and test your DIY Salt Water Powered Car

DIY Salt Water Powered Car

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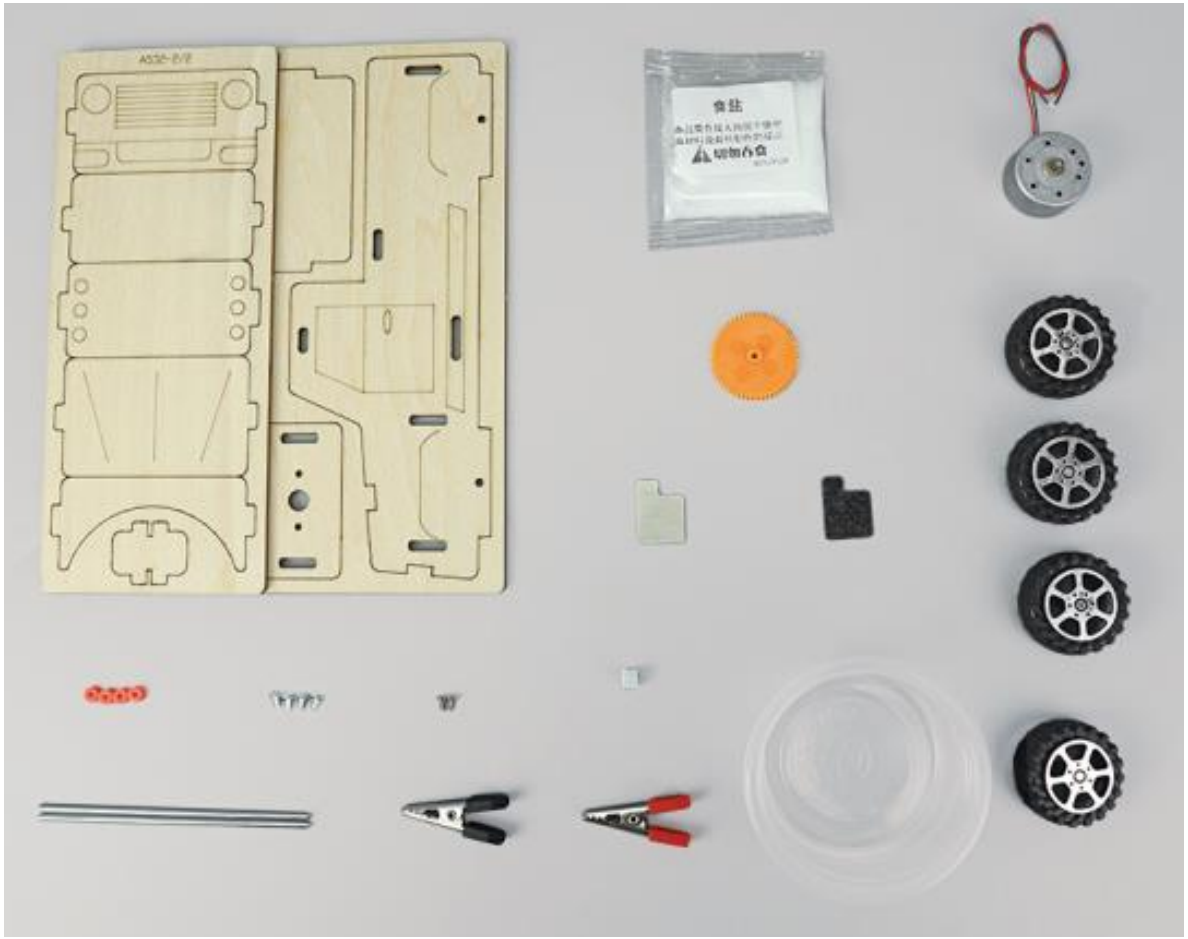
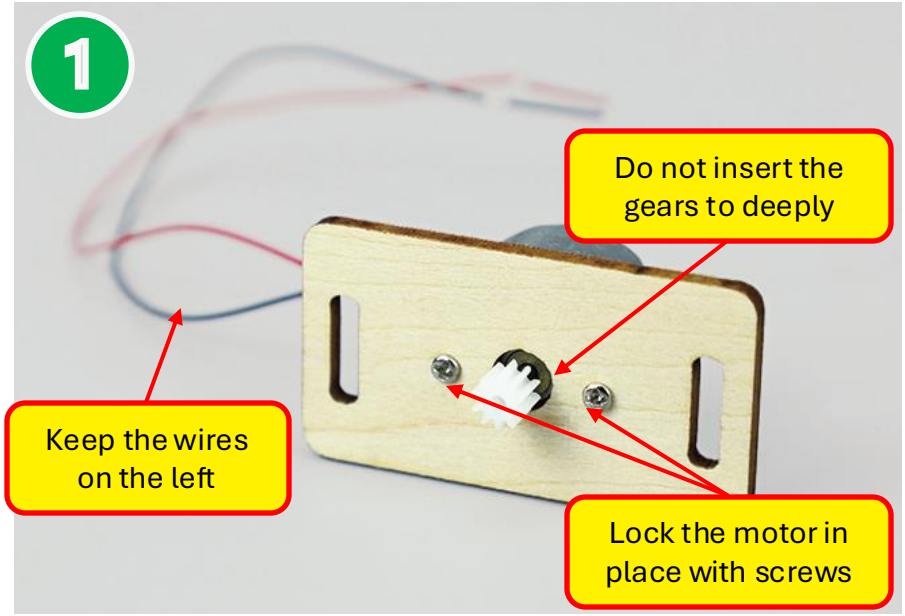
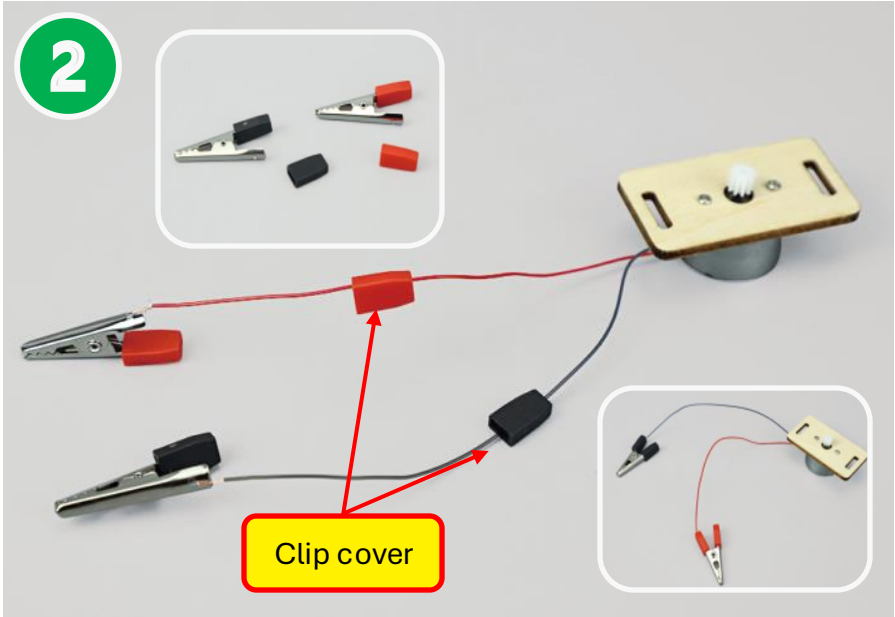
DIY Salt Water Powered Car – Components



DIY Salt Water Powered Car – Instructions



Attach the motor with the gear piece inserted to the wooden piece as shown above



Insert the wires from the motor through the clip cover and attach it to the metal part of the crocodile clip. Twist the wires to tighten and cover the wire back with the clip cover.

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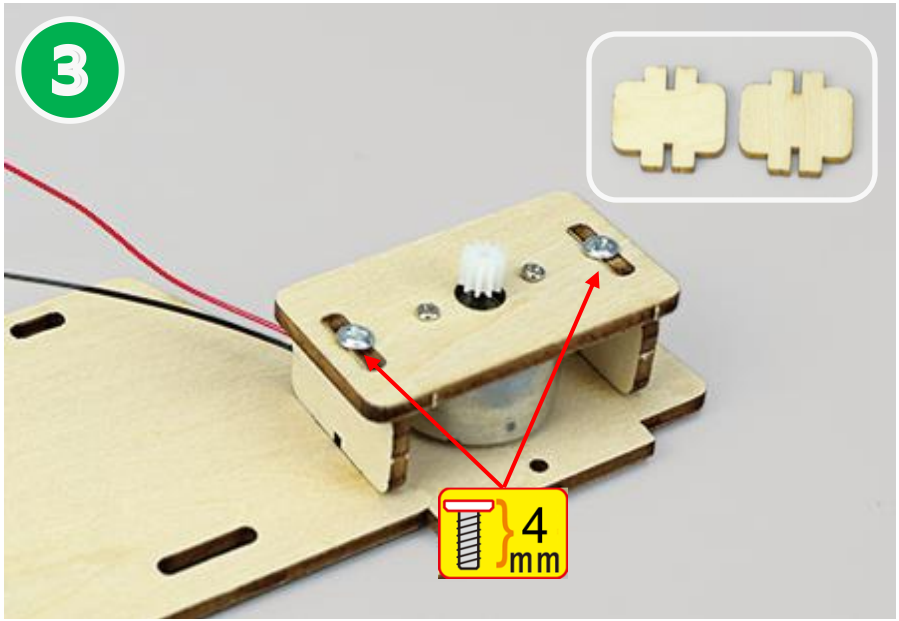
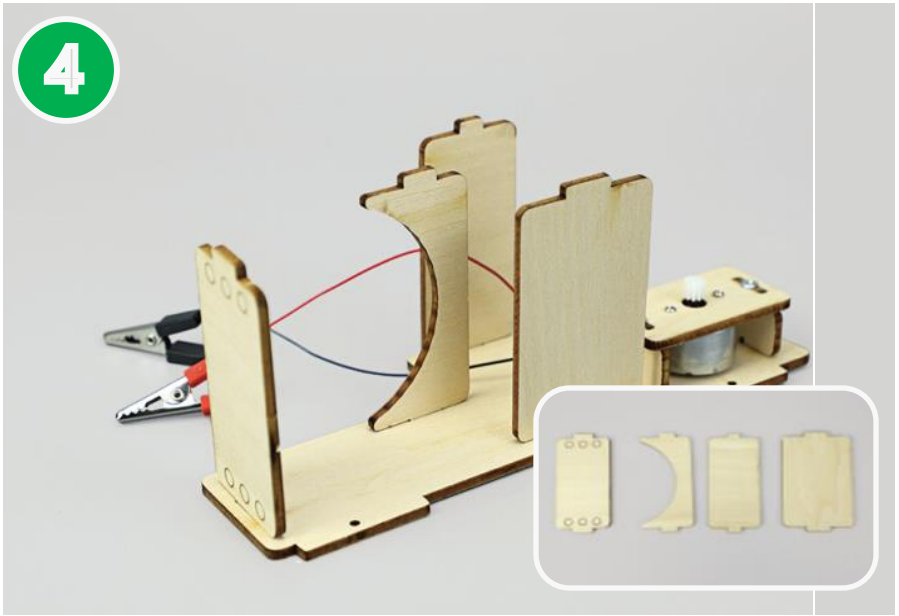


Fit the wooden pieces together and lock them on both sides using the 4mm screws as shown above



Fit the wooden pieces together as shown above

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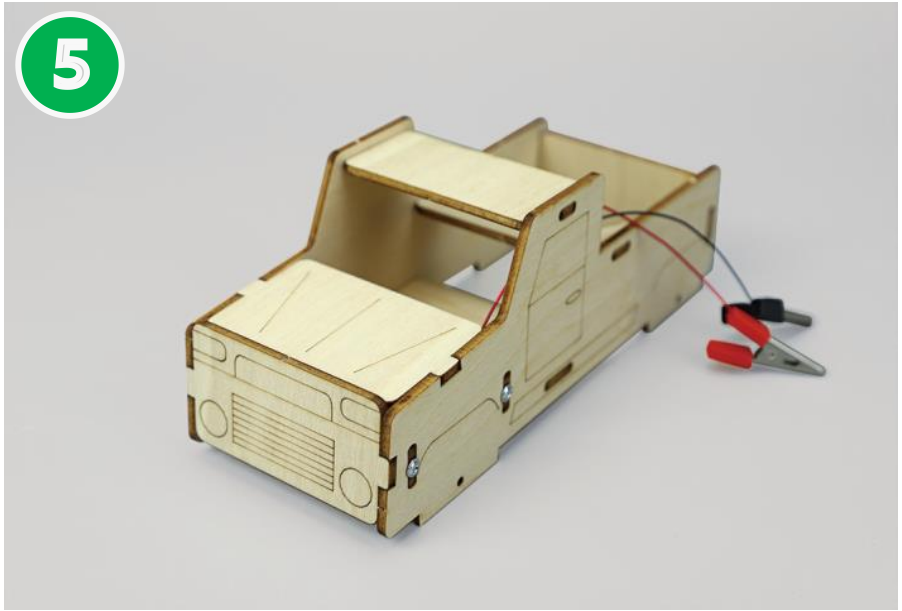
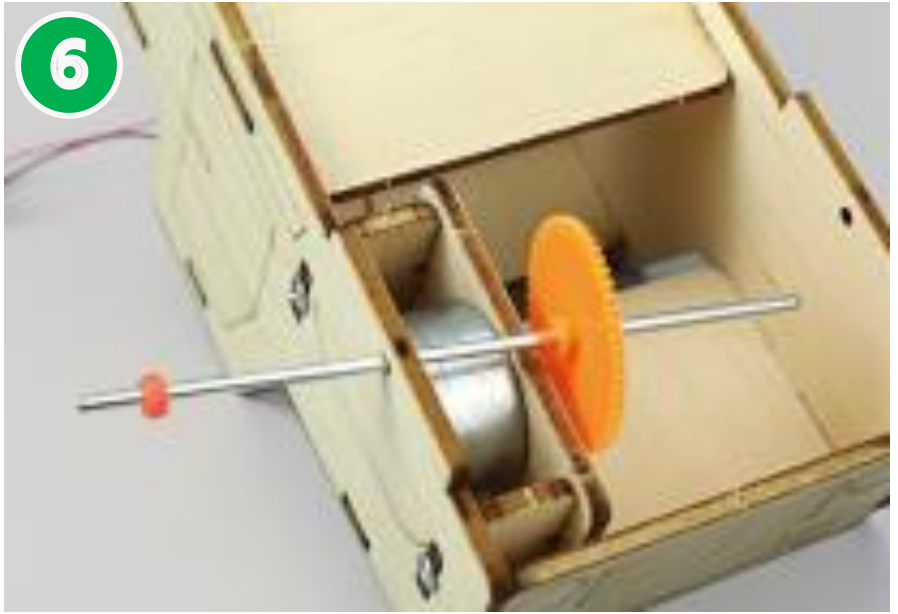


Fit the wooden pieces together as shown above



Fit the big gear into the shaft and insert the shaft through the hole in the wooden piece and use a sleeve to hold the shaft in place as shown above

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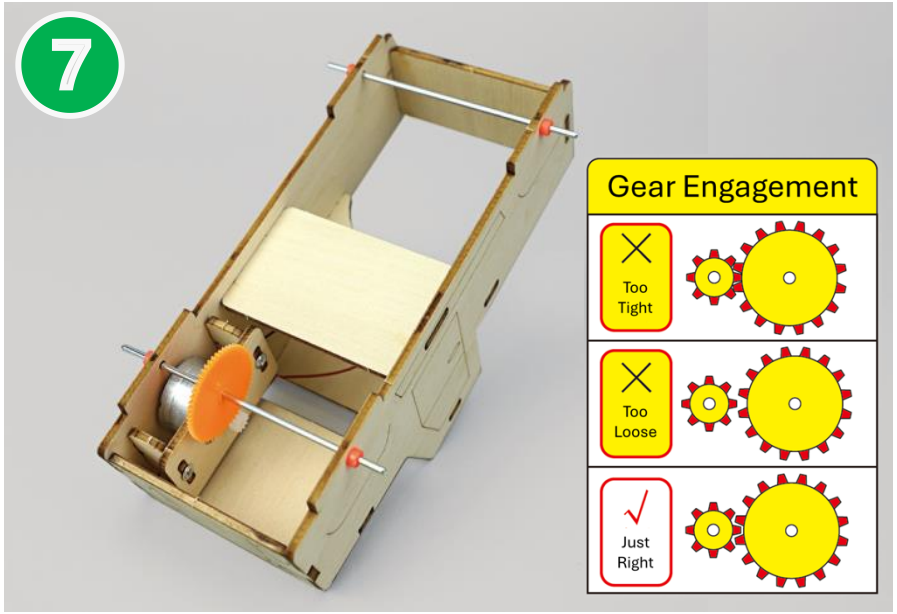
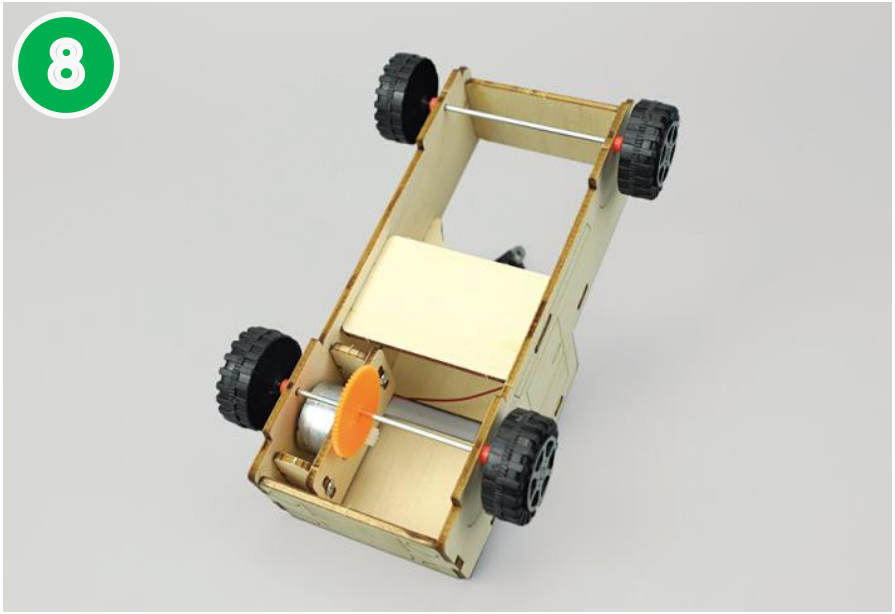


Insert the shaft through the other side of the wooden piece and use a sleeve to hold the shaft in place as shown above. Ensure the gear is placed just right



Insert the 4 wheels as shown above

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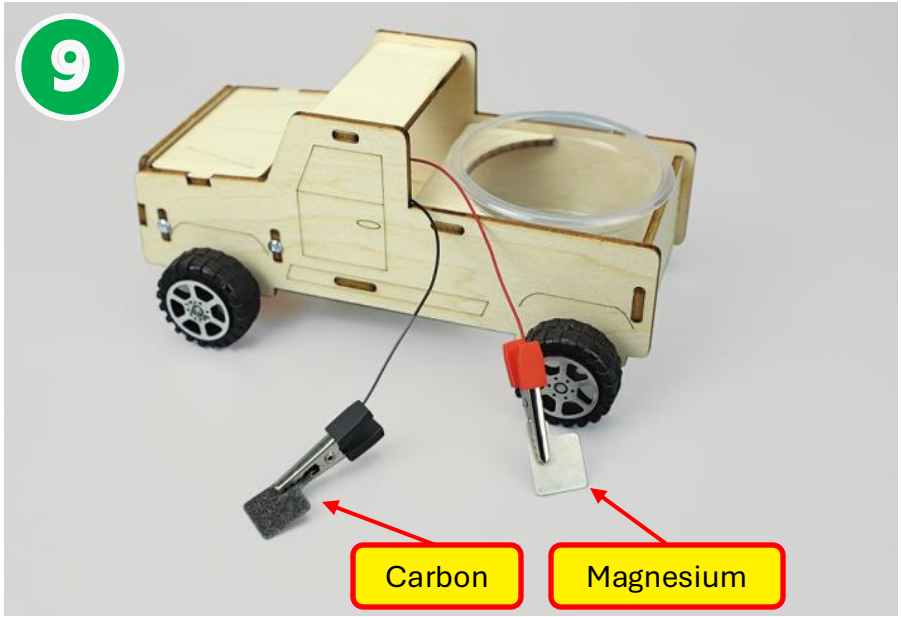

Clip the Carbon sheet to the black crocodile clip and the Magnesium sheet to the red crocodile clip

Dissolve salt with water into the clear container and insert the Carbon and Magnesium sheet into the container

DIY Salt Water Powered Car – Complete

5. Test

Test the DIY Salt Water Powered Car. Does it work? How can the car move faster? Try and collect feedback.

6. Rework

Make the necessary adjustments based on the feedback collected.

Add colours to your DIY Salt Water Powered Car to make it more appealing.